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Board of NATURAL RESOURCE
COLSTRIP HEARINGS

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VOLUME 22

TRANSCRIPT OF PROCEEDINGS

JANUARY 30, 1976



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FRIDAY, JANUARY 30, 1976

The hearing reconvened at 8:35 A.M. on Friday, January 30, 1976 in the Chambers of the Montana House of Representatives, State Capitol, Helena, Montana.

The Honorable Carl M. Davis, Hearings Examiner, presided over the proceedings.

APPEARANCES:

Applicants:

John L. Peterson, Esq.
William M. Bellingham, Esq.
John Ross, Esq.

Department of Natural Resources and Conservation:

William G. Sheridan, Jr., Esq.
Donald MacIntyre, Esq.

Northern Cheyenne Tribe, Inc.:

Peter Michael Meloy, Esq.

The following proceedings were had:

CONTINUATION OF EXAMINATION OF DR. PETER R. EDMONDS

Redirect, by Applicants

By Mr. Peterson:

Q Dr. Edmonds, yesterday during the cross-examination by Mr. Meloy, there was some discussion relative to an area known as Badger Peak. I want you to assume that Badger Peak is 43 kilometers south-southeast of the Colstrip plants and that for a 24 hour sampling period the maximum ground level

1 concentration has been predicted to be 4.06 micrograms per
2 cubic meter. First of all, have you converted that 4.06
3 micrograms per cubic meter to parts-per-million?

4 A Yes, I have.

5 Q And what is it in parts-per-million?

6 A In parts-per-million it is equivalent to 0.0015 parts-per-
7 million.

8 Q Would that concentration cause any damage to public health or
9 welfare?

10 A That concentration is the maximum predicted concentration and
11 I would not expect in any reasonable way that it would cause
12 any detrimental affects to public health or welfare.

13 Q Now, also on table 1, your statement at page 32, there was a
14 calculation made by you which was repeated on page 33, rather
15 on page 34, regarding beryllium emissions, and you were asked
16 by Mr. Sheridan whether or not your computation of .003
17 should not have read .031. Assuming that calculation should
18 read .031, what difference would that make in your conclusions
19 regarding the effects of beryllium?

20 A Absolutely none. The conclusions I have so stated in this
21 testimony are completely unchanged.

22 MR. PETERSON: I have no further questions on
23 redirect.

24 MR. SHERIDAN: No re-cross.

25 HEARINGS EXAMINER: You have no exhibits with this
26 witness, have you? Very well, you are excused. Thank
27 you, sir.

28 (WITNESS EXCUSED)

1 MR. BELLINGHAM: At this time, the Applicants
2 call James H. Waldon. We have no exhibits to introduce
3 through him. A copy of his written statement has been
4 turned over to the reporter.

5 HEARINGS EXAMINER: Would you please stand, sir,
6 raise your right hand and be sworn.

7
8 JAMES H. WALDON, called as a witness by the Applicants, having been
9 first duly sworn upon his oath, both as to his written direct
10 testimony and as to the oral testimony to follow, was examined and
11 testified as follows;

12
13 (THE WRITTEN DIRECT TESTIMONY OF MR. JAMES H. WALDON WAS
14 DIRECTED TO BE INSERTED AT THIS POINT.)

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1 TESTIMONY OF JAMES H. WALDON
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3 My name is James H. Waldon, my age is 60, and I am the
4 field construction manager for Bechtel Corporation. Bechtel
5 Corporation's Engineering Department designed Colstrip Units
6 1 and 2 and Bechtel is also the main contractor for the construc-
7 tion of the units. The same is true as to Colstrip Units 3 and
8 4.

9 I graduated from high school at Haskell Institute, Lawrence,
10 Kansas. Thereafter I had approximately three years of junior
11 college education and vocational training at Haskell Institute
12 and completed the electrical vocational school there. Included
13 in the foregoing three years of work was the instruction con-
14 cerned with leadership on the Indian reservations. Following
15 the foregoing education, I went to work for the Bureau of Indian
16 Affairs for approximately two years. Thereafter I worked for
17 Lockheed Aircraft Corp. for approximately eight years where I
18 worked up to the position of Supervisor of Electricians. In 1947
19 I started work with Bechtel Corporation and have been with this
20 company since. During this period I have engaged in construction
21 work. I started as an electrician and have worked up to my pre-
22 sent position.

23 Most of my experience with Bechtel in the generation field
24 has been with fossil-fired generating units using coal, gas and
25 oil. As far as coal units are concerned, the largest coal-fired
26 generating unit that I have worked with is a 650 megawatt unit in
27 North Carolina. I was working on this unit when I was requested
28 to go to Colstrip and at that time I was also project superinten-

1 dent.

2 I arrived at Colstrip, Montana, during February of 1973.
3 At that time I believe there were less than 100 people working
4 upon Colstrip Unit No. 1. As field construction manager for
5 Bechtel Corporation in the construction of Units 1 and 2 I have
6 supervised the installation of the units. As such, I have a
7 staff of superintendents and field engineers, an office manager,
8 and others totaling approximately 100 people who supervise the
9 construction efforts.

10 I am three-eighths Chickasaw blood. Because of my Indian
11 heritage, my schooling at Haskell Institute, and my experience,
12 I feel that I have a sympathy and community of interest for
13 people of Indian background and as a result I believe I can work
14 with Indians and talk to them more effectively than I otherwise
15 could.

16 During the course of building Units 1 and 2 and down to
17 the middle of December, 1975, the peak employment working upon
18 the two units was approximately 1,452 workers, of which approxi-
19 mately 1,068 were employed by Bechtel with the remainder, approxi-
20 mately 384, employed by the subcontractors. There were approxi-
21 mately 20 subcontractors working upon the project. This was
22 during the spring of 1975. As of the middle of December, 1975,
23 there were approximately 1,070 employees working upon the project,
24 of which approximately 775 were employees of Bechtel with the
25 remainder employees of the subcontractors.

26 A survey was made by Bechtel of the Montana state residents
27 and out-of-state residents working on the Colstrip units during
28 the spring of 1975. This was during the peak employment period

1 and the survey included Bechtel employees as well as employees
2 of the subcontractors. Of the total Bechtel employees of 1,068,
3 411 were from out-of-state and 657 were state residents. This
4 results in a percentage figure of 38% for out-of-state residents
5 and 62% for in-state residents. Out of a total of 384 employees
6 of the subcontractors 91 were from out-of-state and 293 were in-
7 state residents. This results in a percentage figure of 24%
8 out-of-state and 76% in-state residents. The total percentage and
9 numbers of workers upon the two units are tabulated as follows:

| Number <u>Out-of-State</u> | Number <u>In-State</u> | Total Number | Percentage <u>Out-of-State</u> | Percentage <u>In-State</u> |
|-------------------------------|---------------------------|-----------------|-----------------------------------|-------------------------------|
| 502 | 950 | 1,452 | 34.57% | 65.43% |

13 Of the total number of people working upon the project at
14 the middle of December, 1975, I would estimate that the percentages
15 of in-state and out-of-state workers would be approximately the
16 same as the figures above. In our analysis of in-state and out-
17 of-state workers we are not referring to their residences while
18 working upon the Colstrip project. Instead, we are referring to
19 their residences prior to commencing work upon the project.

20 Of the various crafts working upon the project as of the
21 spring of 1975 (peak employment period), I would estimate that
22 20% were boilermakers, 20% were pipefitters (also known as steam-
23 fitters), 20% were electricians, 15% were carpenters, 15% were
24 laborers and 10% comprise miscellaneous trades including sheet-
25 metal workers, painters, operating engineers, teamsters and
millwrights. As the project nears completion, the mechanical
26 trades will increase in percentages, these being the boilermakers,
27 pipefitters and electricians.

1 Throughout the construction of the units Bechtel has given
2 preference for work to Montana residents and it is my under-
3 standing that this is also true of the various unions who accept
4 employment requests. On a project of this magnitude, manpower
5 requirements for the electricians and pipefitters, for example,
6 always exceed the normal manpower supply for the craft in the
7 area and additional skilled craftsman must be obtained from sur-
8 rounding areas.

9 Robert Labrie, then assistant chief engineer for Montana
10 Power, immediately after I assumed the job of field construction
11 manager asked me to consider giving job preference to Indians
12 and particularly to Indians of the Northern Cheyenne Tribe. After
13 discussion it was agreed that this would be done and this pro-
14 cedure has been followed.

15 When I was on my way from North Carolina to take over the
16 Colstrip job, I visited Haskell Institute to see if they would
17 make a special effort to train Northern Cheyenne Indians at the
18 welding school which the Institute conducts. There is always a
19 shortage of welders throughout the country on construction jobs
20 so my interest was to train Northern Cheyenne Indians in order
21 that they would be available as welders for the Colstrip units.
22 This was during February of 1972, and I asked the authorities at
23 Haskell Institute if I could recruit Northern Cheyenne Indians
24 to attend the Institute with the idea of taking the two year
25 course in welding. The response was very good from the Institute
26 officials. After arriving in Montana I talked to Allen Rowland,
27 Chairman of the Northern Cheyenne Tribe, Alonzo Spang, Superinten-
28 dent of the Northern Cheyenne Reservation, and Valera Hayes, head

1 of the employment for the Bureau of Indian Affairs at Lame Deer,
2 with the hopes that they could spur enough interest among the
3 Northern Cheyenne Indians so that some would attend the welding
4 school. However, the results were not productive because there
5 apparently was no one interested in going to the school and I do
6 not know of anyone who did enroll in the welding school.

7 During the summer of 1972, I recommended to Montana Power
8 officials that we start a welding training program at the job
9 site in the hopes that we could train interested Indians in weld-
10 ing which would lead to a job at the project. The idea was
11 accepted immediately by Montana Power and a school was opened at
12 the job site by Bechtel which was open to everyone, Indians and
13 others alike. Approximately 15 Northern Cheyenne Indians attended
14 the school and practically all of them completed it. Approx-
15 imately 8 Indians from other tribes also attended the school.
16 During the spring of 1975, we had approximately from 10 to 12
17 Northern Cheyenne Indians who had attended the welding
18 school working upon the Colstrip project as welders. They had
19 become journeyman welders upon their completion of the school.

20 Both the Northern Cheyenne and the Crow tribes started their
21 own welding schools and it is my recollection that early in 1973
22 we offered to supply some of Bechtel's welding engineers to go
23 into the tribal shops and help them with the schools if the
24 officials desired us to do so. We heard nothing from the Indian
25 officials regarding our offer.

26 The Northern Cheyenne opened a new welding shop some time
27 during the spring of 1974 and at that time I was invited down to
28 the opening. I could see they had a need for scrap iron, surplus

1 welding coupons, and other materials with which to practice
2 welding and we accordingly offered to give them this material.
3 About three times they have come to the Colstrip site to pick
4 up these materials.

5 We have constantly encouraged the Northern Cheyenne Indians
6 to obtain jobs at the Colstrip project. When construction was
7 first begun in 1972, approximately 15 to 20 Cheyenne Indians were
8 employed at the project by Bechtel and between 12 to 15 Crow
9 Indians. During the spring of 1975, approximately 70 Indians
10 were employed on the project by Bechtel and I would estimate that
11 between 30 and 40 of these were Northern Cheyenne. Approximately
12 a dozen were Crow Indians and the remainder were from various
13 other tribes such as Sioux and Blackfeet. Of the total Indians
14 on the job, over half of them were laborers with the remainder
15 divided into welders, iron workers and carpenters. As of the
16 middle of December, 1975, we had approximately 31 Indians working
17 for Bechtel upon the Colstrip project. Of this number, approxi-
18 mately 14 were laborers with the remainder being divided into
19 welders, iron workers and carpenters. Approximately ten of this
20 number were Northern Cheyenne. The figures given above as to
21 the number of Indian employees refer to Bechtel only and do not
22 include Indians working for subcontractors upon the project. I
23 know that a few Indians are also working for the subcontractors.

24 In addition to the contacts made with Indian officials and
25 others listed above, we have worked with the Northern Cheyenne
26 Tribal Council on various matters and met with it once regarding
27 a possible bus service to the project site. Furthermore, we have
28 met with different committees of the Northern Cheyenne Tribe at

1 least six or more times relative to the employment of Cheyenne
2 Indians upon the Colstrip project and similar matters.

3 I have had numerous discussions with the International
4 Brotherhood of Electrical Workers, the United Association of
5 Pipefitters, the Iron Workers Union and other labor union repre-
6 sentatives in working out a relationship between the Northern
7 Cheyenne Tribe and the unions over work permits, hiring practices
8 and terminations. Also discussed has been the commencement of
9 apprenticeship programs on the reservations.

10 The labor turnover at the Colstrip project appears to be
11 approximately the same when compared with other Bechtel projects.
12 It should also be noted that the Colstrip project would be classed
13 as a remote project because of its distance from population
14 centers. In this connection, the labor turnover at the Colstrip
15 project does not appear to be as great as most of the other
16 remote Bechtel jobs of which I have knowledge.

1 HEARINGS EXAMINER: You may cross-examine, Mr.

2 MacIntyre.

3 MR. MacINTYRE: Thank you, Mr. Davis.

4

5 EXAMINATION OF JAMES H. WALDON

6 Cross, by Department of Natural Resources and Conservation

7 By Mr. MacIntyre:

8 Q Good morning, Mr. Waldon. How long have you been an employee
9 of Bechtel?

10 A 29 years this month.

11 Q Have you been employed throughout that time at all times with
12 Bechtel?

13 A Yes.

14 Q No break in service?

15 A No.

16 Q Are you being paid to testify here today?

17 A No.

18 Q You prepared this statement yourself?

19 A This statement was made by me in deposition and it was recorded,
20 and some corrections were made by Mr. Bellingham here.

21 Q You are presently the Field Construction Manager for units 1
22 and 2?

23 A That's right.

24 Q And will you hold that same position for units 3 and 4?

25 A Right.

26 Q How long have you been the Field Construction Manager at units
27 1 and 2?

28 A Shortly after I arrived at the job three years ago.

1 Q And how long have you been a field construction manager?

2 A Well, I've been a project superintendent for several years; a
3 field construction manager is just a title change.

4 Q In essence, the duties of a project --

5 A It's practically the same duties as a project superintendent.
6 They have to change our titles occasionally to get us up in
7 the world a little bit.

8 Q What other coal-fired plants have you worked at in a capacity
9 similar to a field --

10 A I started out in 1950 on power plants in Los Angeles,
11 Southern California Edison. From there I went to Salt River
12 in Phoenix, Arizona and was on a total of five units;
13 Yuma, Arizona for Arizona Public Service, one unit; Kemmerer,
14 Wyoming for Utah Power and Light, one unit; Florida Power and
15 Light at Cape Kennedy, one unit; Ft. Myers, Florida, one unit;
16 Orange and Rockton Utilities at Stonyport, New York from the
17 Hudson River, one unit; Homer City, Pennsylvania, Penn Electric
18 and New York State Gas and Electric, one unit; and I was at
19 Cliffside, North Carolina for Good Power, one unit, and a
20 short term at Langdon, Missouri for Union Electric and then
21 here in Montana.

22 Q Those were all coal-fired plants?

23 A All coal-fired, yes. Well, some had gas in connection --
24 gas start-up and some were oil started. You might say a
25 combination of -- Well, Florida was gas, no coal in Florida.

26 Q Did any of these units use the venturi scrubber type works before?

27 A No, this is my first scrubber.

28 Q Did you work on the Corette Plant in any capacity?

1 A No, I didn't work on the Corette Plant.

2 Q What are your duties with respect to the venturi scrubbers?

3 A Just the overall supervision, coordination.

4 Q Who are you supervising?

5 A We have a subcontractor --

6 Q And who is that?

7 A The prime contractor is Combustion Engineers Associated, out
8 of New York City.

9 Q Have you ever seen a unit on which there were venturi scrubbers
10 before?

11 A Not as a visual inspection; I've been by the Las Vegas Plant,
12 but not as a --

13 Q And you've never worked on one?

14 A No, all of my jobs have been electric precipitators, electric
15 started precipitators.

16 Q Prior to coming to Colstrip, you were the project superintendent
17 at a plant in North Carolina; what plant was that?

18 A Duke Power, Cliffside Plant, Cliffside, North Carolina.

19 Q Was that the first plant on which you worked in the capacity
20 of a project superintendent?

21 A No.

22 Q When was that first?

23 A My first job, I believe, as a full project was at Orange and
24 Rockton Utilities in New York.

25 Q What year was that?

26 A That was 1961, I believe, to '63.

27 Q So in essence from 1961 until today you've had essentially the
28 same position with Bechtel Corporation?

1 A Yes.

2 Q Did anyone accompany you from North Carolina when you came
3 out to Colstrip?

4 A Yes, I released my civil superintendent who came up here to
5 start the job; my job engineer is on this job that was with me
6 in North Carolina. That's the only two. One is no longer
7 with me. The job engineer is still on the project.

8 Q What are your particular duties as the Field Construction
9 Superintendent on this job?

10 A Well, I have the overall supervision of the construction;
11 I supervise -- I have direct under me a field superintendent
12 and craft superintendents. I have approximately 100 people
13 on my staff, consisting of field engineers, office personnel,
14 accounting, an office manager, safety department, field
15 procurement, material handling, nurses and this sort of thing.
16 So I coordinate and supervise the entire setup.

17 Q Is it your responsibility to personally hire these individuals?

18 A Sir?

19 Q Is it your personal responsibility to hire the individuals
20 you've just named?

21 A Yes.

22 Q You hire every individual that works on your staff?

23 A I -- no, I request them. We have -- this sort of staff, the
24 key people are with the company, they travel with the company.
25 I request certain people and I get certain people through
26 our personnel in San Francisco who handle the manpower
27 situation. If there is any hiring to be done in the field,
28 I do it.

1 Q So then these are typically people that are with Bechtel and
2 are not union people hired directly in Montana for the most
3 part?

4 A My non-manual personnel, yes.

5 Q And that totals about 100 individuals?

6 A Approximately 100 people.

7 Q Do you know, of that 100 people, how many of those are
8 residents of the state of Montana prior to coming to Colstrip?

9 A Out of these, I would say less than 20 percent that we hire
10 in the field after we get on the project. Some people may be
11 from Montana that have been with Bechtel for some time; this
12 happens just about everywhere you go.

13 Q Have you done a survey to determine the exact number of the
14 100 people, how many of those are Montana residents prior to
15 Colstrip 1 and 2?

16 A Yes, I don't have it here with me but we have those records,
17 where each person is from.

18 Q And it's just your estimate then that it's less than 20 percent
19 from Montana for those 100 individuals?

20 A I would guess around 20 percent, yes.

21 Q Do you have your statement in front of you?

22 A I have a copy of the deposition here that you have.

23 . MR. BELLINGHAM: The written testimony is what
24 he is referring to; you have a copy of that, don't you,
25 not the deposition, but the testimony?

26 MR. WALDON: Yes.

27 Q On page 2, line 18, you mentioned the fact that peak employment
28 working on units 1 and 2 is approximately 1,452?

1 A That's correct.

2 Q When you use the word approximately, where did you derive that

3 number from; is that part of your survey?

4 A That's part of a forecast we make monthly in our planning and

5 scheduling group. We forecast the job each month.

6 Q So it may or may not have been 1,452; it may have been less

7 or more?

8 A It could have been less; it could have been more, however, we

9 worked out just about that number.

10 Q And it's this 1,452 figure that you base your resident survey

11 on, the survey that was done by Bechtel Power Corporation?

12 A Yes.

13 Q Is there much turnover in the Colstrip project?

14 A We've compared it to other projects of this nature. We sort

15 of consider Colstrip as a remote area, and our turnover is

16 about average of any other project of this nature. We do have

17 considerable turnover in the workers.

18 Q The survey that was conducted by Bechtel Power Corporation, is

19 that a written survey; were there results that were put down

20 somewhere in a written form?

21 A Yes, we have charts and numbers of our surveys, yes.

22 Q You don't have those here with you today, do you?

23 A No.

24 Q Where would those records be, at Colstrip or in Bechtel's

25 headquarters in California?

26 A Both places, they each have copies.

27 Q Who in Bechtel made these surveys?

28 A We have a planning and scheduling department in the field.

1 We also have a planning and scheduling in the San Francisco
2 office who supervises these people, and that's a joint effort;
3 it initiates in the field.

4 Q Did you personally take any part in the making of the survey?

5 A I'd like to clear up the survey; are you still speaking of the
6 manpower notice?

7 Q No, the manpower survey that you made, that the results are
8 reported on page 3 of your testimony?

9 A Okay, what was your question?

10 Q Whether you personally took part in this survey?

11 A Oh, yes.

12 Q What was your function; what did you do?

13 A I put the final dressing on it, whether I agree or disagree.

14 Q Has Bechtel made a survey of this type before?

15 A We make this survey on all projects.

16 Q You report your period of peak employment, and that is 1,452
17 workers, what is the duration of that period?

18 A It varies from three to four months.

19 Q Three or four?

20 A Three to four months period duration.

21 Q Can you tell me with any certainty today, if I asked you of
22 any specific date, whether or not there were 1,452 workers?
23 You could tell me there were that many on that one particular
24 day?

25 A Yes.

26 Q Now, the figure 1,452, how is it computed?

27 A By crafts and by man hours involved in the -- which way the
28 budget is for the project, and initially it's a forecast taken

1 from our budget, you might say a guesstimate. It's updated
2 each month as the job progresses and as we see what's being
3 engineered, what we have to build. We don't always have a full
4 picture of the project when we move in so we have to kind of
5 wait on our engineer to show us what we have to build out there.

6 Q Did you make an actual count to come up with the figure 1,452?

7 A We keep a daily force report of the employees.

8 Q And that daily force report would show you then that you had
9 1,452 workers on any one day?

10 A That's right.

11 Q Does this 1,452 figure represent the most that worked on one
12 day or does it represent an average over the peak period?

13 A Well, that number could be one day, but it could be over a
14 period of several weeks, but I have an example of our latest
15 force report and this would give you the exact figure on that
16 particular day. The next day might be different because you
17 have absenteeism involved, or you may have two or three people
18 quit on any particular day, or you may hire six or eight people
19 the next day; that is the way it would vary.

20 Q Now in your survey that was made for this hearing, you used
21 the term Montana state residents. In making that survey, how
22 was the term residents defined?

23 A We define it as the people that live in Montana.

24 Q Live in Montana as of when?

25 A Prior to us coming to the area.

26 Q Does that mean that if there was an employee who had come to
27 Montana prior to Colstrip 1 and 2, that was working on another
28 project in the state but had been here only a month before

1 going to work for Colstrip and it appeared on his hiring card
2 that his last job was in Montana, that he would be considered
3 in your survey as a resident of Montana?

4 A It is unlikely it would appear as a resident because we get
5 these records from the hiring halls and an out-of-stater who--
6 a union man has a travelers card with him. That's what he
7 presents to the business agent with his local union, and his
8 address and home are on it; he has to present that so we get
9 pretty accurate numbers, names and addresses from the business
10 man. If he comes to us, he may give us an address of P. O. Box
11 2, Colstrip; that's all we know about him, but we go back to
12 the union halls and we can get their actual address.

13 Q Is that what you did for this survey, and who did that?

14 A Yes, we did it with our payroll department. We contacted the
15 business managers in the union halls.

16 Q Did your people determine for what period of time that any
17 one particular person was a resident of the state of Montana,
18 that is, whether or not he had been a lifelong resident,
19 whether he had been one for five years or a year?

20 A No, we didn't get into that depth of it.

21 Q Your survey is to include Bechtel employees as well as the
22 employees of the subcontractors?

23 A Subcontractors, yes.

24 Q That includes your personal staff as well as yourself?

25 A Yes.

26 Q Is your survey such an in-depth survey that it would reveal to
27 me the percent of out-of-state versus instate residents on any
28 particular day throughout the peak employment period?

1 A I don't quite follow your question.

2 Q Well, if I took a day sometime in mid-May, a particular day,
3 and I asked you for a breakdown of percentage instate versus
4 out-of-state, you could give me that figure?

5 A We only made the one survey.

6 Q It was general in nature?

7 A General, yes. We don't follow this sort of thing.

8 Q Well, the survey then was made for a particular reason and
9 that being for these hearings?

10 A Right. I might add that we encourage local people, especially
11 in a camp job of this nature where we have trailers, people
12 move in trailer homes, because we know those people will stay
13 with us. They're more dependable than out-of-staters; the
14 out-of-staters may be with you a month, from now on, or two
15 months, or one payday. Some of them are steady; it depends on
16 the work load throughout the country, but your local people
17 or instate people are the steadier people so we encourage this
18 sort of thing.

19 Q How do you encourage them?

20 A Through the business representatives we request this type of
21 people.

22 Q You ask the business representative to get you that kind of
23 people?

24 A Yes.

25 Q But you don't actually go out and solicit individuals to go
26 to the --

27 A No, we don't go out and solicit workers unless they can't
28 supply them. If they can't supply them, then we have an

1 agreement with them that we can go out on our own and recruit,
2 and nine times out of ten that's out-of-state because we've
3 saturated the people. We had quite a group of people come from
4 Great Falls; they had a strike up there of plumbers and pipe-
5 fitters, and it really helped us out here because they were
6 with us several months, two or three months or longer.

7 Q You didn't go out and solicit them, they came down?

8 A We called for them, yes.

9 Q How did you call for them?

10 A Through the business representative.

11 Q So you didn't actively solicit them without going through the
12 agent?

13 A No, we knew they were available and we asked him to go after
14 them.

15 Q Did you have to actively solicit anyone on the Colstrip projects,
16 other than through the business agents?

17 A I can ask for a person, yes.

18 Q Did you do that?

19 A I have, many times.

20 Q On your tabulated report on page 3 of your testimony, you give
21 us a breakdown on the 1,452 employees, 502 of which are out-of-
22 state and 950 which are instate. Now, the instate number of 950,
23 you have a percentage breakdown of what portion of those are
24 of Indian background?

25 A At present we have 31 Indians on the project. We've had as
26 high as 70 or 80.

27 Q And those would be reflected in this 950 figure?

28 A They would be in this 950 figure.

1 Q Were all Indians considered residents from the state of Montana?

2 A There's a few from South Dakota and Oklahoma, very few. Most
3 of them are either Northern Cheyenne, Crow or Sioux, residents
4 of this state.

5 Q Could you put a number figure on the Indians not from Montana,
6 approximately how many?

7 A I'd say approximately 95 percent.

8 Q Were Montana?

9 A Right.

10 Q Do you know what the percentage breakdown of Montana residents
11 versus non-Montana employees was when you first came to Colstrip?

12 A When I first came?

13 Q How many employees were on the job when you first got to Montana?

14 A Well, there were only about 100 people on the job when I came
15 and most of those were subcontractors.

16 Q And do you know what percentage of the subcontractors were
17 Montana residents?

18 I would say all of them were. They were local contractors out
19 of Billings and they had their own men workers and I'd say
20 95 percent of them, at least, were Montana people. The
21 foundation work and concrete work initially was subcontracted
22 through local contractors.

23 Q In the middle of December of 1975, you estimate that the
24 percentage of instate and out-of-state workers would be
25 approximately the same as your survey showed for peak employment?

26 A Percentagewise, it would run approximately the same.

27 Q What do you base that estimate on?

28 A Well, sort of a rule of thumb, I guess, mostly a guesstimate.

1 Q So it could be higher or it could be lower?

2 A Yes, it could be, but you usually know the faces and see the
3 people and in general it's about the same people that are there.

4 Q Is there only one method that Bechtel Power or you could use
5 to determine whether or not a person was a resident of the
6 state of Montana, and that is by going to the hiring hall and
7 looking at his hiring slip?

8 A We would just have to make a personal survey and take the
9 person's word for it.

10 Q So there are only two methods then?

11 A Yes.

12 Q And you chose to do the first one?

13 A The first one is much more accurate than any way we know of.

14 Q Well, wouldn't it be more accurate to actually go to the
15 person and ask him, interview him?

16 A Well, it's fairly accurate, but you don't always get the truth
17 out of some of these people, where they may be from or what.
18 They may be hiding from their wives and kids and they won't
19 give you an address. We've had the sheriff pick up a few that
20 we thought were local and they lived in San Diego or somewhere.

21 Q That would be true of the hiring slip method of taking a survey,
22 too, if they were hiding?

23 A The hiring slip is pretty accurate because that business
24 representative just won't put you to work unless your ticket
25 is on the up and up, and that has to have your local union
26 number and address on it.

27 Q So you believe it's more accurate?

28 A I believe it's more accurate than any other way we could devise.

1 Q You don't think that your men are very honest, that they'd talk
2 to you and tell you the truth about where they're from; there
3 are some that wouldn't?

4 A There are some that wouldn't, yes.

5 Q Again on page 3 of your statement, you give a breakdown of the
6 various crafts working on the project as of the spring of 1975,
7 which is the peak employment period, and you make an estimate
8 of the percentage of the crafts in your survey. Did you also
9 make a percent residency breakdown of those crafts?

10 A This particular survey, I didn't have numbers with me when I
11 made this testimony; it was something I picked out of the air.
12 I went back later and checked with the force report and it was
13 fairly accurate. We do have, on any given day, the number of
14 crafts breakdown on this force report, and this again depends
15 on the time period of the job. You start the job with your
16 civil people, concrete people, carpenters, and you have very
17 few of the metal trades, boilermakers, electricians and pipe-
18 fitters, but as the job grows and your steel is up and you
19 start your electrical work and your piping work, then those
20 crafts predominate; you have more of those people and the rest
21 taper off. But at the peak of the job your major crafts are
22 pipe fitters, electricians, boilermakers, sheet metal workers
23 and this sort of thing.

24 Q With respect to your survey, the 65.43 percent, is it your
25 guess then that of the 20 percent that were boilermakers, that
26 there were approximately 65 percent of those from Montana?

27 A I believe the survey shows just about all the boilermakers that
28 I had were from Montana. Now the subcontractor who erected the

1 boiler had the biggest majority of the boilermakers, and after
2 saturating the boilermaker man power in Montana, he went out
3 of state to get workers, but the majority of the boilermakers
4 are from cut of the Helena area; their local is here at Helena
5 and this is where we call for boilermakers. The local here
6 covers the state; their headquarters are here in Helena. We
7 did have to bring some from the West Coast and the Minneapolis
8 area to man the job.

9 Q So then your percentage breakdown for boilermakers would be
10 approximately in the area of 65 percent for boilermakers or more?

11 A This 65 percent is a total; boilermakers from instate would be
12 in that percentage, yes.

13 Q Of your pipe fitters, were the majority of those from Montana?

14 A Yes.

15 Q Did you have many pipe fitters or pipe fitter welders from
16 west Texas?

17 A I hope not, but it's possible we get them. We conducted a
18 welding school in Texas, but they come in and take their test
19 and find out there's no overtime and they may be in Louisiana
20 the next day. We do import -- we got some welders out of the
21 Houston area, yes, but not western.

22 Q They have to take a test before they're actually hired, don't
23 they?

24 A All our welders take a test before they can go to work.

25 Q So none of those people that would have come in and taken the
26 test and found out there was no overtime and left would be
27 included in this 1,452 figure?

28 A No.

1 Q Were there a greater percentage of electricians from the state
2 of Montana?

3 A Yes. There again, we had to go out of state to get electricians
4 and fortunately for us there was unemployment throughout the
5 country and we were able to recruit men, but once we saturated
6 the town of Billings and the surrounding areas -- they still
7 had to maintain the jobs in the state for the state contrac-
8 tors -- then we had to go out and recruit for additional people
9 to man our job, but we normally get all the local people first,
10 as many as they can give us from the union hall.

11 Q What is the usual procedure for hiring any one individual in
12 any craft?

13 A The usual procedure -- first of all I write a letter to each
14 business agent projecting our work load for the coming month,
15 so he has an idea of what we are going to need. Then on a
16 daily basis as I need or as my superintendent may need a
17 craft, I do the calling; I'm the only one that makes the
18 contact.

19 Q After you make the contact, do you know what the procedure is
20 in the union hall itself, how do they give out jobs?

21 A They have their work lists there of the men that are available;
22 they take whoever is number one on the list and he sends him to
23 the project with a referral to fill in our order.

24 Q Would you agree with me that it's customary that the union
25 would first give preference to its members and then preference
26 to its sister unions in the state of Montana, and then it would
27 hold some openings also for travelers that hold union cards that
28 come through?

1 A I would have to say the unions give preference to their local
2 members, yes.

3 Q And that's a customary procedure?

4 A That's all over the country.

5 Q That's not just Montana?

6 A That's not just here, no; it's everywhere you go.

7 Q If I looked at your study, or your survey, or the data that
8 you used to put this survey together, could I tell from that
9 how many of the workers employed at Colstrip are from urbanized
10 centers rather than from rural communities?

11 A The difference? I didn't quite --

12 Q Well, could I tell from the data you used to make your study
13 for the individual employees, whether they came from an urbanized
14 area rather than a rural community such as we would find in the
15 Colstrip area?

16 A Not on here, no, this wouldn't show it.

17 Q Would you agree with me that most of the out-of-state employees
18 at Colstrip 1 and 2 came from basically urbanized areas rather
19 than from areas such as Colstrip?

20 A They came from urbanized areas.

21 Q On page 4, starting at line 1, where you say, "Throughout the
22 construction of the units, Bechtel has given preference for
23 work to Montana residents," --

24 A I think I stated this awhile ago; I explained this.

25 Q Well, actually is Bechtel giving preference and isn't that
26 really what's customary in any state?

27 A Any state, yes. We prefer to get the local people.

28 Q Anywhere where there's -- especially where there's union jobs,

1 such as at Colstrip, the unions, being their customary practice,
2 insist that first preference is given to the state employees?

3 A Yes.

4 Q So this preference is not initiated by Bechtel in essence?

5 A Throughout the history of Bechtel we have practiced this.

6 I would say we initiated it as a company to give preference to
7 the local people.

8 Q That's not peculiar to the Colstrip project?

9 A No, this is a part of our relationship with the unions.

10 Q Other than your own staff, do you do any of the hiring?

11 A I have hired for the project, yes, workers. We were at one
12 stage where we just couldn't get people so we were recruiting
13 and I hired people right at the gate. They were permitted to
14 work once I recommended them to the business agent that they
15 were qualified, and he would issue them their work permits.

16 Q You didn't hire anyone first without going through the business
17 agent, did you?

18 A Well, I tried not to, but I have, and later told him about it.
19 Normally I try to notify him first that I'm going to hire
20 a certain person.

21 Q You also make the statement on page 4, starting at line 4 that,
22 "On a project the size of Colstrip, when the man power require-
23 ments exceed the normal man power supply for a craft in an
24 area, then additional craftsmen must be obtained from surround-
25 ing areas." Now, is it solely the magnitude of the size of
26 the project or is it also the remoteness of the project, the
27 fact that Colstrip is where Colstrip is?

28 A I don't believe so; the remoteness may have something to do

1 with it, but most of our jobs of this size we've had to
2 recruit from out of state, and that's in almost every state.

3 Q If Colstrip was to be built closer to a load center, such as
4 Seattle or Spokane, don't you think you'd have more man power
5 there to build Colstrip 1 and 2?

6 A We have a nuclear job on the Columbia River in that area and
7 they're in worse shape than I am for man power.

8 Q So you are saying that the remoteness has nothing to do with
9 the ability to hire state residents?

10 A The remoteness doesn't have too much to do with it if the
11 conditions are right for the worker, if he has decent living,
12 places to live and that sort of thing, but the Trojan Plant
13 which I spoke of, they are in a populated area and, of course,
14 there's more work going on in a populated area so the man power
15 is saturated up, and they have to reach out and they may even
16 try to steal someone away from me if they can get away with it.

17 Q Then I take it that your answer to my question is, yes,
18 remoteness has something to do with it, to a limited extent at
19 least?

20 A I would say so, yes, to the extent a person wants to work but
21 he doesn't want to move his family; he has a home and kids in
22 school somewhere so he needs to work, so he'll come and work
23 and stay several months; so this would affect it in that sense.

24 Q Do you have many individuals like that working at Colstrip?

25 A Yes, as a matter of fact we have a man camp which will hold
26 up to 360 men, and we normally have about 180 if they're all
27 single, but they have families somewhere.

28 Q By families, you mean they're married and have a family or --

1 A Yes, and some of those are instate; they may live in Billings
2 and come up and stay in camp four nights a week and go home for
3 the weekend; a lot of them do.

4 Q In my reading of the last two paragraphs of page 4, commencing
5 at line 9, I get the impression that Mr. Labrie of the Montana
6 Power Company informed you, after you assumed the job, that he
7 would like you to consider giving preference to Indians,
8 particularly Northern Cheyenne, and then on your way to
9 Montana to take that job over, that you started to pursue
10 this avenue and went to Haskell Institute to see if they could
11 make a special effort to train the Northern Cheyenne?

12 A I went to Haskell Institute on my own before I talked to Mr.
13 Labrie, but we had discussed it many times about the potential
14 on the --

15 Q When was your first contact with Mr. Labrie, after you assumed
16 the job?

17 A No, I came up from the Carolinas a couple of times and met at
18 the job site with Montana Power.

19 Q Before you assumed the job?

20 A Before I assumed the job, yes.

21 Q Was it at Montana Power's request or at Bechtel's request that
22 you pursue the action that you did by going to Haskell Institute,
23 or is this something that you did on your own?

24 A This is something I did on my own because I went to school there;
25 I graduated from Haskell, so I came through on a visit and
26 discussed the possibilities of improving the welding school and
27 if they would do more recruiting from the Northern Cheyenne
28 Reservation, that it was adjacent to the job and there was a

1 potential there that we could probably develop some welders
2 who would be with us throughout the project.

3 Q How far is Haskell Institute from the Colstrip area?

4 A It's in Lawrence, Kansas.

5 Q Do you know approximately how far that is?

6 A It must be 1,500 miles. But they enroll Indians from all over
7 the United States; 72 different tribes are represented there
8 from 38 different states.

9 Q Did Mr. Labrie tell you how you were to consider giving job
10 preference to the Indians?

11 A No, he didn't tell me how.

12 Q Did you initiate the discussions or did he?

13 A Truthfully, I don't know just how it came about, but I think
14 he initiated the discussion about employing the Northern
15 Cheyenne.

16 Q And this was prior to your accepting the job?

17 A No, it was after I got up there.

18 Q So it was after you went to Haskell Institute then?

19 A Yes.

20 Q So you were aware that there was an Indian Reservation?

21 A I was aware that the potential was there and it was in my
22 mind to try to start this program on my own.

23 Q And on your arrival to Colstrip did you inform Mr. Labrie that
24 you had done so?

25 A I did inform him that I had stopped at Haskell, yes.

26 Q Then my impression in reading this statement was not correct;
27 actually it should be that you visited Haskell Institute before
28 you talked with Mr. Labrie and he asked you to consider hiring

1 the Northern Cheyenne?

2 A I visited Haskell first, yes, on the way up here.

3 Q During the summer of 1972, you recommended to Montana Power
4 that you start a welding school, a welding-training program
5 on the job, is that correct?

6 A Right.

7 Q That school was open to both Indians and non-Indians?

8 A Yes.

9 Q You state in your testimony that approximately 15 Northern
10 Cheyenne attended this school?

11 A Yes.

12 Q You also have a figure, and could you tell me approximately
13 how many Montana residents attended this school?

14 A I don't have the figure with me, but just about all of them
15 were Montana residents. That was the agreement that I made
16 with the local unions, that if I set the school up we would
17 school local people, and we included Billings, Forsyth,
18 Miles City, Ashland, Lame Deer and Crow Agency, and that's
19 where we tried to initiate getting our students from.

20 Q Were there any Montanans from outside that area that you
21 allowed to go to that school?

22 A We put many of the pipe fitter apprentices in the school, and
23 they were all from the Billings area.

24 Q So in other words, this school was mostly limited to those
25 individuals in the Colstrip area extending as far as Billings?

26 A Yes, I did accept one Indian from Minnesota and put him through
27 the school; he's still working there. And I think I had one
28 from South Dakota, but other than that there were very few that

1 or their wife was using it. So I felt if we could get a bus
2 run from Ashland up to Lame Deer, we could see that those guys
3 got to work on time and daily.

4 Q Did you have problems with absenteeism and tardiness?

5 A Yes.

6 Q Was that peculiar to just the Northern Cheyenne or did you
7 have that with people from the surrounding areas as well?

8 A That's everywhere.

9 Q Did you ever get the bus service to any of the locations?

10 A No, they told me if I wanted a bus service, why didn't Bechtel
11 put one in, so that ended the meeting. We did get a bus
12 service from Forsyth to Colstrip but not from Lame Deer to
13 Colstrip.

14 Q Did Bechtel put in the bus service?

15 A No. At that time the Cheyennes had buses; they did have a bus
16 run for their own schools and they were closing it down for
17 some reason.

18 Q You don't know what the reason was?

19 A They were going to get out of the busing business altogether,
20 so that's one reason they weren't too enthused about a bus.

21 Q You make mention of the fact that the turnover at Colstrip does
22 not appear to be as great as most other remote Bechtel jobs
23 of which you have knowledge. What other remote Bechtel jobs
24 are there of this magnitude?

25 A Well, Rock Springs, Wyoming we consider as a remote job, a
26 camp job, and then we have one in Page, Arizona and that is
27 remote. We're starting another one in northern Arizona, and
28 we survey these jobs and compare them and they all average

1 out about the same.

2 Q What's the project at Rock Springs?

3 A A power plant.

4 Q How big a power plant is that?

5 A Well, we built three units there, a little larger than the
6 Colstrip unit, and they now have a go-ahead on the fourth
7 unit.

8 Q Do you have any idea how many man years per megawatt is needed
9 to build say a 500 megawatt power plant?

10 A No, I don't have that information.

11 Q Would you disagree with me if I told you it was about 3.75
12 man years per megawatt?

13 A I would have no idea because we never measure in man years.

14 Q You would have no reason to dispute that then?

15 A No.

16 Q Do you know how many man-hours it took to build 1 and 2, or is
17 taking to build 1 and 2?

18 A Yes, we have the exact number; I don't have it with me.

19 Q And do you know how many man-hours it will take to build 3 and
20 4?

21 A We have a forecast, yes.

22 Q You don't have that before you?

23 A I don't have it with me.

24 Q Do you know what the ratio is between 1 and 2 and 3 and 4,
25 how much the difference is, percentage?

26 A I'm guessing it would be 25 percent more or 20 percent more.
27 The peaking would be somewhat greater and the duration is
28 somewhat longer.

1 Q About how much longer is the duration?

2 A We have a tentative schedule to complete unit 3 in 1980 and
3 unit 4 in 1981, and originally it would have been '79 and '80,
4 and we have lost one year or so on these projects on down the
5 line.

6 Q Well, it took about four years to build 1 and 2 didn't it?

7 A From the initial start, yes. From the time engineering started
8 to the completion it's about four years for two units. The
9 construction period would be about three.

10 Q So in essence it will take more man-hours to build 3 and 4,
11 and it will take a longer duration of time?

12 A They are larger units, yes.

13 Q Okay, and it will take more men?

14 A It will take more men, yes.

15 Q About how many more men?

16 A I believe we are forecasting a peak of close to 1,600.

17 Q Almost 200 more men to build 3 and 4 than it did to build 1
18 and 2?

19 A At the peaking period, yes.

20 Q Would you agree with me that many of the same workers, especially
21 Montana residents that worked on 1 and 2, will be working on
22 3 and 4?

23 A They are hoping to, yes.

24 Q You will need to get more men from out of state then?

25 A It depends on the work load throughout the state and the
26 programs in the state of developing more crafts and apprentice-
27 ships. We have asked the unions and they are upgrading their
28 apprenticeship programs and adding more apprentices to their

1 programs, just about doubling them, so if they can develop
2 the people, that's where we'll get them from.

3 Q And of the out-of-state employees that worked on 1 and 2, do
4 you expect those same ones to come back or do you expect new
5 and different ones?

6 A It's unlikely. There would be some that would come back if
7 maybe they liked it here, but if he's got a job close to home,
8 he's not going to come up here.

9 Q Is it your opinion then that at Colstrip 1 and 2 you had
10 approximately 65 percent Montana residents and that you'll
11 have the same percentage for units 3 and 4?

12 A The percentage would likely run about the same, there again
13 depending on the development of more craftsmen here in the
14 state.

15 MR. MacINTYRE: Thank you Mr. Waldon. I have
16 no further questions.

17 HEARINGS EXAMINER: Mr. Meloy.

18 MR. MELOY: Mr. Davis, I have a statement to make
19 for the record before I start my cross-examination.

20 Mr. Davis, throughout the course of this proceeding,
21 Mr. Bellingham has shifted around witnesses without
22 at least informing me. I'm not sure that he's been
23 informing you or Mr. Sheridan, but I find myself in the
24 position of continually having to go ask Mr. Bellingham
25 who he is going to put on next. Yesterday afternoon I
26 asked him that and he told me Mr. Wahlquist. Mr.
27 Wahlquist talks about transmission lines in this
proceeding, transmission lines that don't affect the

1 Northern Cheyenne. I had no questions of Mr. Wahlquist
2 and I wasn't here this morning when Mr. Bellingham decided
3 to put on Mr. Waldon. I think the very common courtesies
4 that exist in courtroom practices in this state dictate
5 that Mr. Bellingham should have at least let me know
6 that he had changed his mind, because Mr. Waldon,
7 strangely enough, spends half of his testimony talking
8 about the Northern Cheyenne employment. I would appeal,
9 Mr. Davis, to you to direct me or advise me as to how I
10 should go about knowing at least far enough in advance
11 so that I can review the testimony before I have to
12 cross-examine.

13 HEARINGS EXAMINER: Do you want to respond, Mr.
14 Bellingham?

15 MR. BELLINGHAM: Yes, sir. Mr. Meloy, as in the
16 case of the other attorneys on the other side, Mr.
17 Sheridan and Mr. Graybill, we have attempted at all
18 occasions to tell them who we were going to call
19 coming up. They were informed yesterday, Mr. Meloy was
20 and Mr. Sheridan, that Mr. Wahlquist, Mr. Waldon and
21 Mr. McKeown were going to appear next. At that time,
22 we thought Mr. Wahlquist would be the next. There's
23 been a change in that and Mr. Waldon came on first.
24 However, they were fully aware of the fact that these
25 three witnesses were going to appear today, along with
26 another witness who will appear later on if there is time.
27 The fact that Mr. Meloy didn't see fit to get up and come
28 here when the proceedings opened, but wandered in somewhat

1 haphazardly at a later time, during the time that Mr.
2 Waldon was on the stand, we have absolutely no control
3 over.

4 MR. MELOY: Mr. Davis, Mr. Meloy wandered in here
5 because he called Mr. Sheridan at a quarter to nine to
6 inquire as to when Mr. Wahlquist would be done so that
7 he would know when to appear here. Mr. Sheridan at that
8 time told Mr. Meloy that Mr. Waldon was on the stand.

9 MR. BELLINGHAM: We have a problem, of course, like
10 everybody else does, with getting witnesses in and out
11 of Helena, because they all come from outside this area
12 and out of state, in meeting their plane and other
13 schedules, and so this accounts for the problems involved
14 in shifting witnesses around. But certainly Mr. Meloy
15 cannot plead ignorance to the fact that Mr. Waldon was
16 to go on the stand this morning or shortly after.

17 HEARINGS EXAMINER: I think you've made your point,
18 both of you, and I think you can appreciate the fact that
19 the statements were served by the applicants on or about
20 January 10, and sometime today these people were scheduled
21 to testify. It's unfortunate they've had to make changes
22 in scheduling, but I don't know that I can accommodate
23 any of the attorneys that closely as to when any witness
24 will get through. Among the many witnesses there were
25 going to be that day, at least we knew he was going to be
26 here that day and I'm sorry you didn't know about it so
27 you could have been here, but you have the written testi-
28 mony and I guess whether you are going to cross-examine

1 at 8:30 or 10:30 probably won't make that much difference
2 in your cross examination, will it?

3 MR. MELOY: Well, it won't, Mr. Davis, as long as
4 I'm here at 8:30 when the time comes for me to cross-
5 examine. I take it that if I had not called to find
6 out when Mr. Wahlquist was through and Mr. MacIntyre had
7 finished his cross-examination, I would have lost mine;
8 is that correct?

9 HEARINGS EXAMINER: I would assume that's the way
10 we've been operating; at least we've only let the people
11 that are here cross-examine, and generally I have been
12 informed if someone did want to cross-examine. On
13 occasion Mr. Graybill has said there was a witness in
14 the prior hearing that he wanted to cross-examine and
15 we even took them out of order or changed their
16 testimony so he could be here. So, these courtesies,
17 I think, basically have -- we have tried not to cut
18 anyone out of their turn on this thing, so we'll do the
19 best we can on it.

20 MR. MELOY: I appreciate that, Mr. Davis.

21 HEARINGS EXAMINER: It is kind of tough to keep
22 the schedule moving along, as everybody knows. We can't
23 anticipate when these witnesses are going to be here, and
24 I think it's pretty tough on the witnesses to -- you
25 know, so many of them have to stay away from their
26 work and jobs to be available so we can keep this thing
27 moving along, so we'll do the best we can. If you'd
28 please tell me, anyone that's not going to be here, I

1 think we basically -- I remember on various occasions
2 you have told me there were certain witnesses for which
3 you didn't have any cross-examine and so has Mr. Graybill.
4 On other occasions, when they're not here, I've assumed
5 that they are not going to want to cross-examine because
6 my position is that whatever the hours of the hearing
7 are, and that's just like in court, too, the people
8 that are there I guess want to participate and the ones
9 that aren't there, aren't, you know, basically. But
10 we're pretty well informed and this is the first time
11 I think this situation has arisen in many months of
12 proceedings. You may proceed.

13 MR. BELLINGHAM: I would like to ask Mr. Meloy when
14 he intends to get his statements of his witnesses; they
15 are somewhat overdue. They were due in, if I recall, on
16 January 10 and we still haven't received any of them as
17 yet.

18 HEARINGS EXAMINER: I would like to defer that
19 discussion until we get through with this witness, if
20 we can. I think sometime today we should go into
21 generally exactly where we are in the stage of this
22 proceeding, but let's go ahead with this witness and
23 when we get through with the witnesses and -- I've heard
24 the various comments of how much they're worth an hour
25 and there's no use of having all that man power sitting
26 here listening to us talk about how we're going to
27 proceed, so let's take the witnesses and then we'll
28 talk about our procedure.

1 CONTINUATION OF EXAMINATION OF JAMES H. WALDON

2

3 Cross, by Northern Cheyenne Tribe, Inc.

4 By Mr. Meloy:

5 Q Mr. Waldon, what does a field construction manager for Bechtel
6 do?

7 A I supervise the construction of the 1 and 2 power plants.

8 Q You supervise the entire construction project?

9 A Yes.

10 Q Are you planning on being the fellow who has the supervision
11 of construction should the two units 3 and 4 be certified?

12 A I've heard rumors of such, that I will be the man.

13 Q How much influence does the field construction manager have
14 over getting somebody a job?

15 A Well, if he's skilled, quite a bit.

16 Q I bet. What if he's not skilled?

17 A Well, I may not need him.

18 Q You say you're three-eighths Chickasaw?

19 A Right.

20 Q And because you're three-eighths Chickasaw you believe that
21 you can talk with Indians more effectively than you might
22 otherwise; is that correct?

23 A Partially so. I attended an Indian school most of my life, and
24 I was schooled and raised up with various tribes throughout the
25 United States so I feel somewhat qualified towards their under-
26 standing and communications.

27 Q Have the Chickasaw and Cheyenne always had a good relationship?

28 A The Chickasaw and the southern Cheyenne are next-door neighbors

1 in Oklahoma.

2 Q Northern Cheyenne?

3 A History shows we've never had any wars.

4 Q Never had any wars. How about with the Crows?

5 A No, the Crows were peaceful.

6 Q How about the Chickasaw, were they peaceful?

7 A We were never defeated by the whites; we never had any fights.

8 Q What is the other five-eighths?

9 A Well, my father was Scotch and Indian and my mother was an

10 Irish redhead.

11 MR. BELLINGHAM: Would you say that's a good

12 mixture, Mr. Waldon?

13 MR. WALDON: I'd say it's a real good mixture.

14 Q With regard to your efforts to recruit Northern Cheyenne to

15 attend Haskell Institute, your statement leaves me with the

16 impression that that didn't work out too well; is that right?

17 A No, it didn't. Haskell has changed. In my day they concentrated

18 more on trades. Now they are more in the business college end

19 of it and there weren't too many interested in going to Haskell

20 to learn welding. They did pass the word around, but --

21 Q All right. Have you got any business jobs at the construction

22 site?

23 A How's that, sir?

24 Q Do you have any jobs at the construction site for people who

25 have been educated with a business background?

26 A Well, we have our office force, accounting and payroll and this

27 sort of thing, yes.

28 Q Are there any Indians working there?

1 A My secretary is an Indian, and the office manager's secretary
2 is an Indian.

3 Q What tribe?

4 A Northern Cheyenne.

5 Q What does it cost to go to Haskell Institute?

6 A It doesn't cost an Indian anything.

7 Q They pay for his subsistence while he's there?

8 A They pay your room and board and everything's free. It's a
9 government school.

10 Q Do they pay your trip back there?

11 A Yes.

12 Q Everything's completely paid for at Haskell?

13 A Yes.

14 Q Why didn't many Cheyennes go there?

15 A They do.

16 Q You told me that you weren't successful in getting Cheyennes
17 to go there?

18 A Oh, no, in the welding school. They have all trades there, so
19 I was interested in getting them into the welding school so
20 we could -- the potential is there on the reservation and we
21 are always in need of welders throughout the -- I did this
22 in the Carolinas; I was adjacent to the eastern Cherokee, and
23 I got quite a few good welders from the Cherokee nation.

24 Q Why didn't you get any Cheyennes?

25 A I think I stated that they just weren't too interested in going
26 to welding school.

27 Q What did you do to get them interested?

28 A I just talked with some of the officials down there and in

1 employment, Valerie Hayes; she handles most of the job require-
2 ments.

3 Q So after your attempts to recruit Cheyennes for the welding
4 school at Haskell failed, you started a welding program at
5 Colstrip?

6 A Right.

7 Q That was open to anyone?

8 A Anyone, yes.

9 Q That was a welding school?

10 A Yes.

11 Q Did you start a boilermaker school?

12 A No, the boilermakers had the availability of the welding school;
13 we ran several boilermakers through the school.

14 Q Did you establish a boilermakers school?

15 A No.

16 Q Did you establish a pipe fitters school?

17 A No, the pipe fitters had their apprenticeship school on the
18 job site for the apprentices, but I didn't establish it; I
19 just let them use our facilities at night.

20 Q How many Cheyennes enrolled in the apprenticeship pipe fitters
21 school?

22 A I don't know how many they had in the apprenticeship program;
23 that's handled by an apprenticeship committee in the state of
24 Montana, consisting of three contractors and three union
25 officials.

26 Q Do you know whether there are any Cheyennes in the pipe fitters
27 school?

28 A Yes, there are some.

1 Q You don't know how many?

2 A No, I would have no idea.

3 Q Did you start an electricians school?

4 A We had two classes for electricians at night at Colstrip last

5 year. We don't have any this year.

6 Q How about a carpenters school?

7 A No carpenters school.

8 Q Not even a sheet metal workers school?

9 A No.

10 Q Painters school?

11 A No.

12 Q Operating engineers school?

13 A No.

14 Q How many operating engineers work at 1 and 2 right now?

15 A Fifteen.

16 Q How many worked during the construction phase?

17 A That was about our peak, fifteen.

18 Q Fifteen operating engineers worked the entire time?

19 A Yes, that's for Bechtel; the subcontractors had some.

20 Q How about a teamsters school?

21 A No teamsters school.

22 Q Millwrights school?

23 A No.

24 Q So that with the exception of an apprenticeship program in

25 boilermaking and a couple of night classes that aren't run

26 anymore for pipe fitters, the only school that you devised to

27 train folks that you need to have at the construction site was

28 welders; is that right?

1 A Right. I might add the unions have their own schools in
2 Billings that I have nothing to do with.

3 Q We are concerned about your efforts to get Indians trained.
4 Your statement on page 3 lists all of the crafts that were
5 working at the project in the spring of 1975. Would you read
6 all of those crafts please?

7 A "I would estimate that 20 percent were boilermakers; 20 percent
8 pipefitters, also known as steam fitters; 20 percent electricians;
9 15 percent carpenters; 15 percent were laborers and 10 percent
10 comprised miscellaneous trades including sheet metal workers,
11 painters, operating engineers, teamsters, and millwrights."

12 Q No welders?

13 A Welders are classified as pipe fitters.

14 Q Welders are classified as pipe fitters, that's all he has to
15 be?

16 A A pipe fitter welder, a boilermaker welder or electrician
17 welder, they come under that craft.

18 Q All he has to do is be a welder, though, to be a pipe fitter?
19 That's all he needs to do is be a welder?

20 A To be a pipe fitter welder.

21 Q He has to be a pipe fitter welder?

22 A Yes.

23 Q He can't just be a welder?

24 A No.

25 Q We find on page 5 of your statement where you tell us about
26 your welding training program at the job site; that's in
27 Colstrip, is it not?

28 A Yes.

1 Q It states that you had approximately 15 Northern Cheyenne
2 Indians attending the school, and then you say that practically
3 all of them completed it. How many didn't complete it?

4 A I would say two. I don't have that record, but we do have
5 the records. The course is a 12 week course.

6 Q And 13 of the 15 completed the course, is that right?

7 A I believe so; I don't have the records with me.

8 Q Could be less than that?

9 A No.

10 Q Couldn't be less than that. Were they all reservation Northern
11 Cheyennes?

12 A No, I had one in particular, a boy recommended from North
13 Dakota, an Indian boy who had been in the welding school; he
14 went through our school. There was one from Yakima, Washington
15 that went through the school, but primarily the rest were
16 Northern Cheyennes.

17 Q From the Northern Cheyenne Reservation?

18 A Right.

19 Q My count makes it 11 Northern Cheyennes of the 15 who started
20 the course completed it, who were from the Northern Cheyenne
21 Reservation?

22 A Approximately so.

23 Q Where did those Northern Cheyenne live, in Lame Deer?

24 A Lame Deer.

25 Q How did you get the Cheyennes back and forth, or did they have
26 to provide their own transportation?

27 A They provided their own transportation.

28 Q How much did you pay them when they were in school?

1 A They get 60 percent of journeyman's wages while they are
2 going to school. We based it on apprenticeship wages and we
3 gave them that 60 percent.

4 Q Do you know how many able-bodied working Cheyennes there are
5 on the Northern Cheyenne Reservation?

6 A I have no idea.

7 Q Do you know how many are unemployed?

8 A No.

9 Q If I told you that there are 867 working men on the Northern
10 Cheyenne Reservation and 377 unemployed, would that surprise
11 you?

12 A Not really.

13 Q You managed to get 11 Northern Cheyennes trained during the
14 course of your welding program to be welders. Now, assuming,
15 for the sake of my question, that there are 377 unemployed,
16 able-bodied, non-working Northern Cheyenne on the reservation,
17 does 10 seem like a lot or a little to you?

18 A In comparison with the rest of the people that went through
19 that school, I would say that it is a lot. We only put about
20 70 through the school.

21 Q But I'm asking you to compare that with the number of unemployed
22 Northern Cheyenne on the reservation, and I want you to tell
23 me whether that seems like a lot?

24 A I would say yes.

25 Q It does seem like a lot to you? Ten out of 377 seems like a
26 lot?

27 A Yes, because out of 377 there may be only a dozen or so qualified
28 to go to the welding school.

1 Q Ah, you have to be qualified to go to the school, do you?

2 A You have to have some sort of talent.

3 Q What kind of qualifications do you need to have, that only

4 12 would be able to qualify?

5 A The main thing you have to have is the desire.

6 Q Ah, what else?

7 A That's the most important thing.

8 Q And only 12 out of 377, in your opinion, qualified --

9 A I didn't say that.

10 Q What did you say?

11 A I just said that sounded like a good number.

12 Q How many Crows attended the welding course?

13 A I don't believe we had any Crows in that. I'm not sure, but

14 I don't think so.

15 Q How many Crows do you have employed in your office?

16 A None in the office.

17 Q How many Crows do you have employed right now at the job site?

18 A I recognize at least 3 here on this list of 31.

19 Q Three, is that your answer?

20 A Approximately, I'm not sure; I don't have them identified here

21 as to tribe.

22 Q How many Northern Cheyenne Indians do you have presently work-

23 ing at the Colstrip project?

24 A We have 31 Indians presently working on the project and out of

25 those three, they're all Northern Cheyennes.

26 MR. BELLINGHAM: What was that answer?

27 MR. WALDON: Approximately 3 Crows. The majority

28 of those are Northern Cheyenne. There are some Sioux

1 and Blackfeet on the project.

2 Q But you can't tell me how many Indians are Northern Cheyenne?
3 You don't have that number with you?

4 A No.

5 Q It could be five?

6 A No, there's more than five.

7 Q How many of those number of Northern Cheyenne presently working
8 at the site are skilled?

9 A They are all skilled.

10 Q They are all skilled? You don't have any unskilled Cheyennes
11 working on the project right now?

12 A No.

13 Q None?

14 A If they are journeymen they are classed as skilled labor
15 craftsmen.

16 Q Well, laborers are skilled then, I take it?

17 A Yes, sir.

18 Q How about janitors, are they skilled?

19 A I don't have any janitors, but we have a subcontractor who
20 takes care of the janitorial work and I doubt if they're
21 skilled the way my office looks every morning.

22 Q You're not satisfied with the work that your subcontractor,
23 who may have hired a Northern Cheyenne, did; is that right?

24 A Not entirely.

25 Q Are you satisfied with the work that the other Northern
26 Cheyenne are doing?

27 A I didn't say the sub had janitorial work from Northern Cheyennes
28 on his staff. And I'm satisfied with all the Indians I have,

1 very well satisfied.

2 Q All right. You tell me you had approximately 31 Indians
3 working for Bechtel in the middle of December, 1975. That's
4 the same number you gave me that are working there now; I
5 take it you haven't lost anybody or added anybody; is that
6 right?

7 A That's right.

8 Q Of this number, approximately 14 were laborers, with the re-
9 mainder being divided into welders, ironworkers, and carpenters.
10 And then you say 10 of this number were Northern Cheyenne,
11 10 of which number, the 14 or the remainder?

12 A I didn't get that.

13 Q You tell us that there were 31 Indians working in the middle
14 of December of 1975, and you say that of this number approxi-
15 mately 14 were laborers with the remainder being divided into
16 welders, ironworkers and carpenters. The next sentence says,
17 "Approximately 10 of this number were Northern Cheyenne." I
18 want to know which number you were referring to, the 14
19 laborers or the remainder?

20 MR. BELLINGHAM: I think, Mr. Waldon, if you'll
21 turn to page 6 of your statement, if I may interject
22 this, at line 9 and thereafter is what Mr. Meloy is
23 reading from -- I think more specifically at line 15
24 there.

25 A Your question was how many Northern Cheyennes were of each
26 of these crafts?

27 Q I'm trying to understand what you meant by the sentence
28 starting on line 19, starting with the word approximately.

1 It says, "Approximately ten of this number were Northern
2 Cheyenne." I want to know which number you were referring to?

3 A I'm referring to the 70. It says approximately 70 Indians
4 were employed on the project by Bechtel and I would estimate
5 that 30 or 40 of these were Northern Cheyennes.

6 Q I'm talking about the middle of December, 1975 and today.
7 You told me you had approximately 31 Indians working. Now
8 you go to break that down, you tell me that 14 are laborers.
9 That means that 17 are welders, ironworkers and carpenters;
10 isn't that right?

11 A Yes.

12 Q All right. Now, ten of this number were Northern Cheyenne.
13 Do you mean ten of the 14 or ten of the 17?

14 A At present I have nine laborers that are Northern Cheyennes.

15 Q Nine of the 14 are Northern Cheyenne? What's the other one?
16 He must be a welder, ironworker or a carpenter; is that right?

17 A I have two ironworkers, I have five carpenters --

18 Q These are all Northern Cheyenne?

19 A Yes.

20 Q That's seven?

21 A Two of the carpenters are Crows, I beg your pardon. I have
22 six Indians who are pipe fitters and out of that six -- I'm
23 only trying to identify them by their name -- I believe all
24 six are Northern Cheyennes. I don't have them classified by
25 tribe, just by craft.

26 Q Why is that?

27 A I just didn't write it down.

28 Q Does it make any difference to you what tribe they're from?

1 A Not really. I prefer the Northern Cheyennes because they are
2 close by and they're steady workers.

3 Q Is that the only reason?

4 A I don't know of any other reason.

5 Q All right. Now, let me ask you my question again. On line
6 19, you say approximately ten of this number were Northern
7 Cheyenne. The numbers that you listed to me from your notes
8 added up to more than ten. I want to know what you mean by
9 that sentence?

10 A I believe we're referring to that sentence above, the last
11 part of it.

12 Q Yes, but you've got two numbers that you're talking about in
13 the sentence above that, and all I want to know is which number
14 you are referring to, the 14 or the 17, when you say there are
15 ten Northern Cheyennes?

16 A I'm referring to the remainder.

17 Q Okay, you're referring to the remainder. How many Northern
18 Cheyenne are included in the former number, the 14 laborers?

19 A All 14.

20 Q All 14 are Cheyennes?

21 A Yes, at that time.

22 Q But you told me that that hadn't changed?

23 A The number hasn't changed.

24 Q Okay, how many --

25 A I've had more than this on the project between these periods;
26 they may work a week or two weeks --

27 Q I --

28 MR. BELLINGHAM: Let him finish please.

1 A For some reason or other the total number turned out the same
2 from this period now to the period when I made this statement.
3 Q All right. How many laborers are presently working at the site,
4 of the 31 that you told me about?
5 A Nine laborers are presently at the site now.
6 Q So since the middle of December of 1975 to date you have lost
7 five laborers?
8 A Correct.
9 Q How many of those that you lost were Cheyennes?
10 A All five.
11 Q Why did you lose them; did you terminate them or did they all
12 quit?
13 A I recall three were terminated for not producing and the rest
14 were probably terminated for absenteeism.
15 Q What is the total number of laborers that are working presently
16 at the job site?
17 A 74.
18 Q How many workers, non-laborers -- now we're talking about the sec-
19 ond category, the welders, the ironworkers and the carpenters --
20 how many of those people are presently working at the project?
21 A I have 34 carpenters at present.
22 Q That's total?
23 A That's total, and then we have five carpenters.
24 Q Five ironworkers?
25 A Five carpenters.
26 Q Oh, five carpenters?
27 A Five carpenters out of that 34.
28 Q How many again, 34 total carpenters?

1 A Yes.

2 Q Okay, how many ironworkers?

3 A I have 30 ironworkers.

4 Q How many welders?

5 A I have 82 welders, pipe fitter welders.

6 Q 82 pipe fitter welders? No boilermakers?

7 A I have two boilermaker welders.

8 Q Is that included in the 82?

9 A I beg your pardon.

10 Q Well, how many total welders have you got, Mr. Waldon?

11 A I have 82 pipe fitters and two boilermakers, that's 84.

12 Q And electricians?

13 A I have -- the electricians are not broken down as such but I'm
14 sure there's four electrician welders, at least, out of 210
15 electricians. The majority of the welding is done by the
16 pipe fitters on the pipe.

17 Q Okay, that brings me to my question. You say on lines 18 and
18 19 that there are X-number of laborers and then you say
19 the rest are welders, ironworkers and carpenters. Now you've
20 got 210 electricians; none of those are Cheyennes, right?

21 A Yes, one.

22 Q One Cheyenne is an electrician?

23 A Right.

24 Q Why didn't you include him on line 19?

25 A I guess it was an oversight. He might not have been on the
26 payroll at that time.

27 Q How about sheet metal workers?

28 A I don't have any sheet metal workers.

1 Q Painters?

2 A I have no painters. The subcontractor has five painters.

3 Q How many operating engineers do you have?

4 A I have 20. I think I stated 15 awhile ago, but there's 20.

5 Q How many of those are Northern Cheyenne?

6 A None.

7 Q How many teamsters have you got working on the site?

8 A Nine.

9 Q Are any of those Northern Cheyenne?

10 A No.

11 Q How many millwrights have you got working on the site?

12 A I believe it's five.

13 Q Are any of those Northern Cheyenne?

14 A No. I have seven millwrights.

15 Q How many of the 34 carpenters are Northern Cheyenne; I think
16 you started to tell me that?

17 A I gave it to you awhile ago, four Cheyennes and one Crow.

18 Q Four Cheyennes of the 34 carpenters. How many Cheyennes of the
19 30 ironworkers?

20 A Two.

21 Q How many Cheyennes of the 82 welders, or 80 or whatever we
22 decided the total number of boilermaker welders, pipe fitter
23 welders and electrician welders were?

24 A I have 11 listed under pipe fitters, but I believe two of those
25 are straight pipe fitters and the rest are welders.

26 Q How many?

27 A There are 11 total in the pipe fitter craft, but I believe only
28 nine of those are welders; the other two are straight pipe fitters.

1 Q Are they all journeymen?

2 A Yes.

3 Q Are they all members of the local union?

4 A They may be working on permits, some of them.

5 Q How many?

6 A I have no idea.

7 Q Isn't it important to know that?

8 A That's between the individual and the union.

9 Q You told Mr. MacIntyre that when you employ people you give
10 preference to local union members because that was a traditional
11 practice, so it's important to know how many of those Cheyennes
12 are local union members, isn't it?

13 A I don't have that number.

14 Q Of the 14 laborers, nine are Cheyenne; of the 82 welders, 11
15 are Northern Cheyenne; of the 30 ironworkers, two are Northern
16 Cheyenne and of the 34 carpenters, four are Northern Cheyenne;
17 that adds up to 26.

18 A I guess we missed one millwright; I have one millwright.

19 Q Do you know whether all of those people live in Lame Deer?

20 A Not for sure. I know of one that lives on Muddy Creek
21 and I know one that lives at Busby.

22 Q How many would you guess live in Lame Deer, Mr. Waldon?

23 A I couldn't give you a number by guessing, but I would say
24 the majority of them live in Lame Deer.

25 Q In the next paragraph on page 6, you tell us that you tried
26 to get a bus service going.

27 A Right.

28 Q You told Mr. MacIntyre that you never got it going; is that

1 right?

2 A Sir?

3 Q You never got the bus service going?

4 A No.

5 Q Is that because there weren't very many folks to bring from
6 Lame Deer? You got something going from Forsyth, right?

7 A That's because the tribal council didn't want to run a service;
8 we asked them to run one.

9 Q Oh, you asked them to run the bus service?

10 A Right.

11 Q You didn't have to run the bus service?

12 A No, I'm not in that business.

13 Q You're in the business of running a training program, but not a
14 bus service; is that right?

15 A We're not really in the business of running a training program.
16 We are solely dependent upon the crafts to provide us with
17 people, the unions. We have a contract with them. They don't
18 have the people so we have to spend our money and Montana's
19 money training people on the side to try to fill this gap.

20 Q Yes, and that's what we've been talking about most of this
21 cross-examination; isn't that right? We have been talking
22 about your efforts to train the Northern Cheyenne; isn't that
23 right?

24 A Right.

25 Q My question then is that you lead us to believe that you
26 worked with the Northern Cheyenne once regarding a possible
27 service, but that was something that you asked the Northern
28 Cheyenne to provide; isn't that right?

1 A They had a bus service at that time and we asked them why
2 they couldn't run a service to Colstrip.

3 Q Did you offer to provide a bus service?

4 A No, we didn't offer to provide a bus service.

5 Q Okay. Tell me about this work permit system. Does that mean
6 that you can hire folks without them being union members?

7 A If they can't supply a man within 48 hours, we can hire who
8 we want to.

9 Q I'm sorry, I didn't hear that answer; would you repeat that
10 please?

11 A They have 48 hours to provide us with our needs and then after
12 that we can hire whoever we want.

13 Q So if you need somebody, and you requested that person from
14 the local union and they couldn't provide him, then you go out
15 and hire your own person?

16 A If I ask for five electricians and they can't furnish them
17 within 48 hours, we can recruit.

18 Q You've got non-union people working at Colstrip right now?

19 A We have permit people.

20 Q Ah, how many?

21 A I don't have any idea of that.

22 Q You wouldn't even hazard a guess would you?

23 A Well, since we're tapering down on the unit, we don't have very
24 many.

25 Q How many working permit, non-union people did you have at the
26 peak employment period?

27 A I don't have that number.

28 Q You have all nice detailed notes in front of you, don't you,

1 and it's not listed among those notes?

2 A No, all I have here is the force report.

3 Q Does it make any difference to you whether they're union or
4 non-union?

5 A Not if they're skilled and qualified.

6 Q Then it doesn't make a bit of difference?

7 A No.

8 Q On page 7, the last page of your statement, you say that you
9 have numerous discussions with IBEW, the pipe fitters union,
10 the ironworkers union and the labor unions in working out a
11 relationship between the Northern Cheyenne and the unions over
12 work permit hiring practices and terminations. That tells
13 me that there is no relationship; is that true?

14 A Yes, there is. The unions have apprenticeship programs right
15 on the reservation there now, both Crow and Northern Cheyenne.

16 Q But it needs to be worked out?

17 A They need to be improved upon.

18 Q And you are constantly trying to improve those relationships?

19 A Right, and our labor relations department in San Francisco met
20 with them just recently on this subject.

21 Q Who is representing the Northern Cheyenne Tribe in those
22 negotiations and those meetings?

23 A No one.

24 Q No one?

25 A Not in my meetings with the unions, no.

26 Q How can you work out matters with the Northern Cheyennes and
27 unions if no Northern Cheyennes are there to meet with you?

28 A I don't think it states that.

1 Q Doesn't it? Would you please read it, starting on line 3 of
2 page 7?

3 A "I have had numerous discussions with the International
4 Brotherhood of Electrical Workers and United Association of
5 Ironworkers and other local representatives in working out
6 relationships between the Northern Cheyenne Tribes and the
7 unions over work permits."

8 Q So, what you are telling me there is that you are working out
9 those relationships among the unions?

10 A What I'm doing is trying to encourage the unions to increase
11 their apprenticeship programs and get more programs going with
12 the Northern Cheyennes and this sort of thing.

13 Q And you're doing that unilaterally, without the assistance or
14 the input of the Northern Cheyennes; is that right?

15 A Right.

16 Q Did anybody from the Northern Cheyenne Tribe ask you to do that?

17 A No, sir -- well, individuals, but no officials of the tribe.

18 Q Which individuals?

19 A Some of the workers on the job.

20 Q Are any of those folks that you talked to on the job Northern
21 Cheyenne tribal council members?

22 A No, there is no council member on the job.

23 Q What's the percentage turnover in labor among the Northern
24 Cheyennes as opposed to some of the other non-Indian workers
25 at the project?

26 A Percentagewise, it's about the same.

27 MR. MELOY: I don't have any more questions,

28 Mr. Davis.

1 HEARINGS EXAMINER: Are you going to have any
2 redirect?

3 MR. BELLINGHAM: Yes, sir.

4 HEARINGS EXAMINER: Well, we will have to recess
5 now, then. We'll recess and try to start in 15 minutes.

6

7 (RECESS AT 10:35 A.M.)

8

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1 Following a brief recess, the hearing reconvened at 10:50
2 A.M., on January 30, 1976.

3 HEARINGS EXAMINER: Re-direct, Mr. Bellingham.
4

5 CONTINUATION OF EXAMINATION OF JAMES H. WALDON

6 Re-direct, by Applicants

7 By Mr. Bellingham:

8 Q I have just a few quick questions here. You were asked ques-
9 tions relative to establishing of craft schools down on the
10 project. Do you recall that?

11 A Yes.

12 Q And I think you testified previously relative to the welding
13 program that was instituted down there?

14 A Yes.

15 Q Who paid for that welding program?

16 A It comes out of the project funds -- Montana Power and the
17 Puget.

18 Q Do you have any idea of approximately how much they have spent
19 to date on the welding project?

20 A We originally budgeted \$400,000.00 and I believe we are reach-
21 ing near that amount now.

22 Q Now, you were asked various questions regarding the present
23 number and kind of employees upon the job and you referred to
24 notes, as Mr. Meloy indicated, in your file. Now, you were
25 talking about the present number, is that correct?

26 A Right.

27 Q And at page 6, for example, you are there talking at line 9
28 about the spring of 1975, and also at line 15 you are talking

1 as of the middle of December, 1975, isn't that right?

2 A Yes.

3 Q And I presume there have been changes made in the number as
4 well as the individual people working on the job since the
5 middle of December, 1975, down to date?

6 A I was reading some of my numbers off of January 29th force
7 report.

8 Q But there have been changes --

9 A Yes.

10 Q -- made in the numbers as well as the individuals working
11 from December down to the present date, haven't there?

12 A Yes.

13 Q You mentioned permit people working on the job. Would you
14 explain what that means?

15 A Well, a man will come into the union hall. He's a qualified--
16 he can show letters where he has worked for a company at least
17 four years as an electrician, or what. The business agent
18 will give him a work permit and a referral to go to work for
19 us the same as a union member. He may not have a union card
20 but he can qualify to do the work.

21 Q And the permit -- excuse me.

22 A He has served the equivalent of four years apprenticeship and
23 experience of actually working in a certain amount of techni-
24 cal background and experience.

25 Q The permits are issued by whom?

26 A The permits are issued by the business manager.

27 Q And that's the business manager of the union?

28 A Of the craft union hall.

1 Q Now, you previously testified regarding the fact that Robert
2 LaBrie -- this appears at page 4 of your testimony -- asked
3 you to consider job preference to Indians and particularly
4 Indians of the Northern Cheyenne tribe and you previously
5 testified to that on cross. Do you recall that?

6 A Yes.

7 Q Has there been any other Montana Power official that also
8 called your attention to this particular aspect?

9 A George O'Connor has on many occasions. We discussed it. He
10 has called it to my attention.

11 Q Who is George O'Connor?

12 A He was president of the company. I think maybe he is retired
13 now.

14 Q And that's Montana Power?

15 A Yes.

16 Q Do you have any idea how many Indians have actually applied
17 for jobs working upon the Colstrip project?

18 A I would have to guess because so many of them come to the
19 gate, come to my office, or call on the telephone and it would
20 be in the neighborhood of 150 throughout the project.

21 Q Would this include, do you think, Indians that have applied
22 to the various business agents?

23 A Unless they have worked with and through the unions before,
24 they would probably have not gone to the business agent. They
25 would come direct to the job.

26 Q Well, this estimate of approximately 150--what I'm trying to
27 get at--are those Indians who have personally applied to Bech-
28 tel or does that include Indians that have also applied to the

1 various business agents?

2 A Just through Bechtel. I don't know how many of those that
3 might have applied to the union hall.

4 Q As a part of your job have you had on occasions individual
5 Indians come to you who were in danger of losing their jobs?

6 A On many occasions, yes.

7 Q And why do they come to you, do you know?

8 A Well, they know that I am part Indian and will communicate
9 with them. They are reluctant to go to the job steward be-
10 cause they don't seem to want to communicate with the union
11 representative on the job so they'll usually come in and I
12 will hear their story, listen to them, and if they're wrong,
13 I'll tell them. If they're right, I'll tell them.

14 Q Have you on occasion interceded on behalf of Indians who were
15 afraid they were going to lose their job?

16 A Yes, I have interceded with some of my foremen and some of my
17 superintendents where I thought they might be a little hasty
18 in firing him for certain particular reasons, and I have to be
19 very careful because intercede with anyone like that too much
20 he may tell me to shove it, I don't need him any more and run
21 it myself. But, I have on many occasions interceded for them,
22 the Cheyenne boys.

23 Q Do you have an opinion as to whether or not Colstrip project
24 has pretty well used up all of the qualified Northern Cheyenne
25 Indians upon the job?

26 A It is difficult for me to know who all is qualified except
27 through their employment agency down there and some of the
28 people I know. As far as I can tell, the ones that are qual-

1 ified and skilled to do certain types of work on the project,
2 I feel we have screened them pretty well.

3 MR. BELLINGHAM: No further questions.

4 HEARINGS EXAMINER: Mr. MacIntyre, re-cross.

5

6 Re-cross, by Department of Natural Resources and Conservation

7 By Mr. MacIntyre:

8 Q You testified that Mr. O'Connor talked to you occasionally
9 about employment of Indians?

10 A Yes.

11 Q Was that before you assumed your job or after?

12 A No, that was after I was here.

13 Q So your first contact with a Montana Power official would
14 have been Mr. LaBrie?

15 A My first contact was Mr. LaBrie. He was project contact man.

16 Q It is still your testimony that you initiated the talks with
17 Haskell Institute before you spoke with any Bechtel or Montana
18 Power official?

19 A Yes, I did that on my own.

20 Q Do you know whether or not, in the state of Montana, if there
21 is a union for which there are no work permits for that local
22 union?

23 A If there's a union that -- ?

24 Q That issues no work permits for that local union?

25 A I don't know of any.

26 Q You know of no union in Montana?

27 A No.

28 MR. MACINTYRE: I have no further questions.

4 Re-cross, by Northern Cheyenne Tribe, Inc.
5

6 By Mr. Meloy:
7

8 Q Mr. Waldon, Mr. Bellingham asked you on re-direct a question
9 which permitted you to tell us about Indians who came to you
10 for help because they were in fear of losing their jobs, and
11 your answer was they come to you because you are part Indian.
12 Isn't that correct?

13 A I would assume that maybe that's one of the reasons, or maybe
14 they know I'm the boss and come in and want to go to the top
15 hand to hear them out.

16 Q That may be --
17

18 A That could have something to do with it.
19

20 Q That could have something to do with it. The field construc-
21 tion manager is the guy who probably has the most influence
22 over their job as the top gun.
23

24 A This is a possibility.
25

26 Q Is that true with all employees or just Indians?
27

28 A No, all employees. They have an Indian representative on the
job, a steward, and they take their troubles to him and he
comes to me. He's the spokesman. Or he takes it to their
business agent, normally. I have had occasions where some-
body comes in to cry on my shoulder, but the Indians are very
reluctant to go to the job steward or the union representative.
They would rather get in and talk to me.

Q And as field construction manager you have the final decision
to make in terms of whether they are hired or fired?

1 A Yes.

2 Q And that's true with Indians and non-Indians, everybody em-
3 ployed by Bechtel?

4 A Yes, I have the final decision.

5 Q Do you have non-Indians come and talk to you about their prob-
6 lems with their jobs directly?

7 A Very few.

8 Q The last question Mr. Bellingham asked you on re-direct was
9 whether you thought you had used up all the qualified Northern
10 Cheyenne, and you said in answer to that question that you
11 had screened them pretty well.

12 A I'll qualify that by saying that I screen them through the
13 employment department for the Northern Cheyennes. They have
14 a representative that employs their people. She at that time
15 was able to tell me who is who and who has what qualifications
16 and who has a potential that we -- maybe semi-skilled and with
17 some more experience we could make a top hand out of him and
18 this sort of thing, and that's what I meant by that. As far
19 as the overall reservation, your unemployment which you spoke
20 of, I would have no idea as to who might be qualified down at
21 Busby or over at Birney or something like that has never ap-
22 plied or inquired about a job at Colstrip.

23 Q Then your answer to Mr. Bellingham's question as to whether
24 you have used up all the qualified people is no, isn't that
25 right? Or is it yes?

26 A In my opinion, through the government agency there, I feel we
27 have pretty well used up the ones that are available. Now
28 there's qualified people there that have jobs that won't leave

them. Many of them that are satisfied where they are.

Q of those --

A Of those I feel are qualified and skilled enough to do pipe-fitting and welding work and this sort of thing, we've pretty much ran through those people and have a pretty good record of them. And there again, we have gave a lot of them chances and they blew it.

0 Some of them aren't working then, those disqualified people?

A Yes.

Q Would you give those folks a chance again?

A I have given many of them chances. I have gave them as many as three and four chances. We have a company rule if a person is off three days without an excuse, he is terminated and we have been putting on there, not eligible for rehire. We recently met with the unions and considered a 30-day deal on this sort of thing. Instead of eliminating a guy forever, we will give them a 30-day termination. But many a time some of the Indian boys that have goofed up, I have given them another chance to come back and try 'er again.

Q Of those qualified people who you consider to be qualified
that you have fairly well used up, how many is that?

A I would have to guess that maybe we went through 100 people down there.

Q What I want to know is, how many of those you considered to be qualified and available?

A of those what?

Q Of those Cheyennes that you hired that Mr. Bellingham said you exhausted the supply of.

1 A They are all qualified in my opinion.

2 Q Still qualified?

3 A Yes.

4 Q How many of them are working?

5 A I have 31.

6 MR. MELOY: No other questions, Mr. Davis.

7 HEARINGS EXAMINER: Any further re-?

8

9 Re-re-direct, by Applicants

10 By Mr. Bellingham:

11 Q The last answer, was it that they are all qualified when they
12 commence work? Is that it?

13 A I believe so.

14 Q When you say they are all qualified, are you referring to
15 the Northern Cheyenne Indians who actually go to work?

16 A The ones that I hired, yes. That's what I meant.

17 MR. BELLINGHAM: No further questions.

18 HEARINGS EXAMINER: Do you have another question,

19 Mr. MacIntyre?

20 MR. MacINTYRE: Just on that.

21

22 Re-re-cross, by Department of Natural Resources and Conservation

23 By Mr. MacIntyre:

24 Q When you say qualified, does that include that if these Indians
25 are not members of a union that they have a work permit?

26 A We get them a work permit.

27 Q And that's part of their being qualified?

28 A I vouch for their qualifications to the union. If I vouch

1 for their qualifications, he will give them a work permit if
2 I can show that they can do the work and have enough back-
3 ground and experience, he'll give them a work permit.

4 MR. MacINTYRE: No further questions.

5 HEARINGS EXAMINER: Mr. Meloy?

7 Re-re-cross, by Northern Cheyenne Tribe, Inc.

8 By Mr. Meloy:

9 Q Then it isn't the business office that gives the work permit,
10 you're the one that tells the business office of the union to
11 give the work permit, is that right?

12 A If they're not a full-fledged union member, yes.

13 Q But you're the one that makes that decision then?

14 A Yes.

15 MR. MELOY: No other questions, Mr. Davis.

17 Re-re-re-direct, by Applicants

18 By Mr. Bellingham:

19 Q Well, one thing that I want to clarify -- as far as these work
20 permits are concerned, the final person that makes a decision
21 on issuing that, as I understand, is the union itself. Am I
22 correct in that?

23 A Yes, the union -- if he doesn't have a full-fledged union
24 member and he has a -- say someone sends -- they send him over
25 to the unemployment office and they can show him he's quali-
26 fied to do electrical work, he has worked for this contractor,
27 he might have worked in the mines for ten years and never
28 belonged to a union but he's a topnotch head, he will review

1 this and write him out a permit. So, the same way, if I hire
2 at the gate I have to vouch for their -- whether it's Indian
3 or white -- whether he's qualified or whether he's had enough
4 experience to do the work and he will write him a permit.

5 MR. BELLINGHAM: That's all.

6 HEARINGS EXAMINER: Mr. MacIntyre?

8 Re-re-re-cross, by Department of Natural Resources and Conservation

9 By Mr. MacIntyre:

10 Q That holds true for all unions that are working at Colstrip?

11 A All the unions I work with, yes.

12 Q And when you say all, that includes the I.B.E.W.?

13 A I.B.E.W., yes.

14 Q You have men like that working at Colstrip now that hold work
15 permits from the I.B.E.W.?

16 A Yes.

17 Q All right, thank you.

19 Re-re-re-cross, by Northern Cheyenne Tribe, Inc.

20 By Mr. Meloy:

21 Q When an Indian comes to the gate, that means to your office,
22 is that right?

23 A He comes to the receptionist and I usually find out who they
24 are through my secretary. She is a Northern Cheyenne and --

25 Q And if you want to -- oh, excuse me.

26 A If I want them to come in I let them in.

27 Q And if you want him to work then you'll get him a work permit,
28 is that right?

1 A Yes.

2 Q And that process involves calling up the business manager of
3 the union in which he is qualified and tell him to give him
4 a work permit?

5 A Call the business manager and explain his qualifications and
6 he will give him a permit.

7 Q Does the business manager ever call you to ask you about the
8 qualifications of someone who comes directly to the union
9 hall?

10 A Oh, yes, many times. If there is any doubt he will call and
11 explain what the man's experiences are and how he feels
12 about it.

13 Q Why is it important for him to do that?

14 A Well, it would be ridiculous to refer a man up there and my
15 superintendent finds out the first day or two he can't cut
16 it and lays him off, it just costs people money so we try to
17 work out ahead of time not to get people up there we can't
18 use.

19 Q So even though the business manager issues the permit, he has
20 to rely on you to tell him whether you want the guy or not,
21 is that right?

22 A Not in all cases.

23 Q Most cases?

24 A No, not really. If a guy's got good enough qualifications
25 he'll refer him on up without calling me.

26 Q But that's not what you told me a minute ago. You told me--

27 A I told you that on a borderline case where there may be some
28 doubt that he may not have enough experience, he will call me

1 and discuss it with me and see if I want to take a chance on
2 him. But normally, in his opinion, if he has letters showing
3 he's worked for this company or this company for so many years
4 he'll give him a referral and send him on up.

5 Q With a work permit?

6 A Yes.

7 Q What if you, after reviewing his file, disagree with the
8 business manager?

9 A We will send him back then.

10 MR. MELOY: I don't have any other questions, Mr.
11 Davis.

12 HEARINGS EXAMINER: Very well, you are excused,
13 sir.

14 (WITNESS EXCUSED)

15 HEARINGS EXAMINER: Your next witness.

16 MR. BELLINGHAM: Mr. Thomas L. McKeown.

17 MR. MacINTYRE: Mr. Davis, may I make a statement
18 for the record?

19 HEARINGS EXAMINER: Yes, sir, Mr. MacIntyre.

20 MR. MacINTYRE: I would like the record to reflect
21 at this time that interrogatories were served upon the
22 International Brotherhood of Electrical Workers and ans-
23 wers were received by the parties opponent, one set be-
24 ing received June 11, 1975, interrogatory 18, that asked
25 the question whether there were work permits issued by
any local union. The answer by the I.B.E.W., number 18,
27 "There is no work permit in any local unions." The ans-
28 answer to interrogatory number 19, "All electrical workers

1 have cards." Further answers were submitted by the
2 I.B.E.W. in July 1975. In the answer to interrogatory
3 number 19, "Question: What percentage of those employees
4 working on Colstrip units 1 and 2 had work permit cards
5 from Billings local 532 during 1974? Answer: Local
6 532 does not issue work permit cards." Thank you, Mr.
7 Davis.

8 MR. BELLINGHAM: We move that the statement made
9 by counsel be stricken from the record as an improper
10 method of introducing interrogatories at this time. The
11 I.B.E.W. is in the case, they are going to have witnesses
12 here as I understand it, and accordingly anything that
13 is brought up relative to their answers to interroga-
14 tories should be done in the usual and proper manner and
15 not in the manner that has been pursued.

16 MR. MacINTYRE: Mr. Davis, I'll just point out that
17 these interrogatories are under oath and are part of the
18 record of these proceedings.

19 HEARINGS EXAMINER: Very well, I'll take the motion
20 under advisement and we will proceed with this witness.
21 It's in the record anyway.

22
23 THOMAS L. McKEOWN, called as a witness by the Applicants, having
24 been first duly sworn upon his oath, both as to his written direct
25 testimony and as to the oral testimony to follow, was examined and
26 testified as follows:

27 (THE WRITTEN DIRECT TESTIMONY OF MR. THOMAS L. McKEOWN
28 WAS DIRECTED TO BE INSERTED AT THIS POINT.)

1 STATEMENT OF TESTIMONY OF THOMAS L. McKEOWN
2

3 My name is Thomas L. McKeown and I am presently Superintendent
4 of the Colstrip Public Schools. I have held this position
5 since July 1, 1973. Prior to accepting the position as Superintendent
6 of the Colstrip Public Schools I was Superintendent of
7 the Browning Public Schools for approximately eight years and
8 prior to that I was a principal in the Browning public school
9 system for approximately six years.

10 I was born in Butte, Montana, on May 3, 1925. I attended
11 grade school at Cardwell, Montana, and high school at Whitehall,
12 Montana. I attended Butte Business College for a short period
13 and from there I went to Montana State University at Bozeman
14 where I received a Bachelor of Science degree in 1950. After
15 graduating I started teaching in the Browning school system
16 where I taught for approximately five years in the high school
17 system. After that I went to work for the Bureau of Indian
18 Affairs where I worked for approximately three years in the field
19 of education. I was located at Busby, Montana, which is located
20 upon the Northern Cheyenne Indian Reservation. Following my
21 work with the Bureau of Indian Affairs I went back to school at
22 Montana State University for one year where I received a Master
23 of Science degree in 1959. After that I went back to the Browning
24 school system as a principal as I have stated above.

25 Applicants' Exhibit No. 116 is a table showing the enrollment
26 as to School District No. 19, Rosebud County, commencing with the
27 school year of 1964-65 to the school year of 1975-76. This
28 exhibit was prepared under my direction and control and is true

1 and correct. The first column indicates the school year, the
2 second column gives the total enrollment of students in the high
3 school (grades 9 through 12), the third column gives the total
4 number of teachers in the high school, the fourth column gives
5 the teacher-student ratio in the high school, the fifth column
6 gives the total enrollment of students in the elementary school
7 (grades 1 through 8, except 1975-76 which includes kindergarten
8 also), the sixth column gives the number of teachers in the
9 elementary school and the seventh column gives the teacher-
10 student ratio in the elementary school. The enrollment figures
11 indicated in Exhibit No. 116 represent the total number of students
12 registered during the school year involved with the exception of
13 1975-76 where the cutoff date is December 5, 1975.

14 Referring to Exhibit No. 116, for the school year of 1975-76
15 we find that up to December 5, 1975, total enrollment in high
16 school was 231 with 17.4 teachers in high school resulting in a
17 ratio of 1 teacher to 13 students. Also up to December 5, 1975,
18 total enrollment in the elementary school was 536 with 25.2
19 teachers resulting in a ratio of one teacher to 21 students.
20 Approximately 75 of the foregoing elementary school enrollment
21 are kindergarten students, this kindergarten being started for
22 the first time for the 1975-76 school year.

23 Included in the 17.4 teachers in the high school system for
24 1975-76 is one special education teacher, one counselor, a
25 librarian who devotes one-half of her time and a speech therapist
26 devoting .2 of her time. Included in the 25.2 teachers in the
27 elementary school system for 1975-76 is a librarian devoting one-
28 half of her time, special education teachers rated at 1.5, a

1 speech therapist rated at .4 and one teacher under a federal pro-
2 gram devoting all of her time to aid students who have become
3 deficient in their work.

4 The high school Indian enrollment is approximately 20% of
5 the total and the elementary school Indian enrollment is approxi-
6 mately 8% of the total. Most of the high school Indian enrollment
7 comes from the Northern Cheyenne Reservation and the elementary
8 Indian enrollment is divided among many tribes. As a result of
9 the Indian enrollment, the school has been awarded one federal
10 grant which provides after-hours transportation for Northern
11 Cheyenne Indian Reservation students so they can participate in
12 extracurricular activities.

13 The physical plant of the school includes one large school
14 building which has been in operation for some time and four
15 district owned relocatable classrooms. The use of nine relocat-
16 able rooms (eight of which are used for classrooms and one for
17 administrative and other purposes) which are located upon school
18 property have been furnished at no cost to the school district
19 by Montana Power Company and Puget Sound Power & Light Company
20 with the exception of costs covering furnishings, maintenance
21 and operation.

22 In addition, during the present school term we are also
23 utilizing an area in the new shopping center in Colstrip for
24 instructional purposes which is being furnished at no cost to
25 the school district by Western Energy Company. Also being used
26 during the present school term is a trailer furnished at no cost
27 to the school district by Montana Power Company and Puget Sound
28 Power & Light Company which is being used for classroom purposes

1 as well as a facility for special help to students behind in
2 their school work.

3 Expansion of the physical plant as rapidly as possible is
4 presently contemplated. It is hoped that construction of the new
5 facilities and additions to the old will begin late in the spring
6 of 1976 with the entire construction project to be completed by
7 August of 1977. A new elementary school will be built to house
8 kindergarten and grades 1 through 8 and the present school build-
9 ing will be remodeled and additions will be made to it after which
10 it will be utilized for the high school with the exception of
11 certain facilities such as the kitchen, auditorium and gymnasium
12 which will be utilized for both the high school and elementary
13 systems. Both the elementary and high school districts will
14 participate in the construction of a new garage to house and
15 maintain some of the buses.

16 Funds for the construction described above were voted upon
17 by the voters of the two school districts on October 7, 1975, when
18 two bond issues were passed. The elementary bond issue was in the
19 amount of \$1,847,730.00 and the high school bond issue was in the
20 amount of \$1,046,000.00. The elementary bond issue passed by a
21 vote of 253 for and 97 against and the high school bond issue
22 passed by a vote of 327 for and 160 against.

23 The high school district includes approximately 1,462 square
24 miles and the elementary school district includes approximately
25 653 square miles.

26 Applicants' Exhibit No. 116-A titled "High School District
27 No. 19 Mill Levy Comparison" shows the total budgets, total district
28 mill levies and the taxable valuation of the high school district

1 for the school years commencing with 1964-65 down to date.
2 Applicants' Exhibit No. 116-B titled "Elementary District No. 19
3 Mill Levy Comparison" shows the same information as to the ele-
4 mentsary district for the same period. Both exhibits were pre-
5 pared under my direction and control and are true and correct.

6 Of particular interest in the foregoing two exhibits (116-A
7 and 116-B) is the decrease in the district mill levies the past
8 year. Thus the high school district mill levy has reduced from
9 16.95 mills to 8.94 mills and the elementary district mill levy
10 has reduced from 23.39 mills to 9.21 mills. Also of interest in
11 the foregoing two exhibits is the increase in the school district
12 taxable valuation over the past two years. Thus the high school
13 district taxable valuation has increased from \$11,894,844.00 to
14 \$24,181,043.00, an increase of \$12,286,199.00, and the elementary
15 district taxable valuation has increased from \$10,207,513.00 to
16 \$22,393,341.00, an increase of \$12,185,828.00.

17 It is my opinion that the educational opportunities in the
18 Colstrip schools are better now, despite the impact of the
19 Colstrip generating project, than at any recent time in the
20 school's history. One of the reasons for this is the increase
21 in school enrollment which, in turn, makes it possible to offer
22 new courses and extracurricular activities to the students.
23 Subsequent to June of 1973 the following courses and programs
24 have been offered at the high school level for the first time
25 insofar as can be ascertained from existing records: develop-
26 mental reading (for students who lag behind their peers in read-
27 ing skills), speech and debate as a separate subject, consumer
28 economics, advanced science research, drug education, business

1 law, business mathematics, data processing, shorthand, advanced
2 home economics, general matehmatics II, problems of American
3 democracy, sociology, advanced art, full time guidance and career
4 guidance, teacher assistant program for juniors and seniors, a
5 stage band, and special education, including a speech and hearing
6 clinician on a part time basis. In addition, many of the high
7 school programs and courses have been updated and expanded.

8 Turning next to the elementary school, subsequent to June
9 of 1973 a life science laboratory program for grades 1 through 8
10 has been added. Courses in art, home economics, shop, typing,
11 band, and chorus have been added as electives to the upper ele-
12 mentary grades. Furthermore, educational services have been
13 added including a one half time librarian, a full time guidance
14 counselor (added during the school year of 1974-75, dropped this
15 school year but hope to add it next school year), a full time
16 special education teacher, a full time special education aide,
17 two half time first grade aides, one half time speech and hearing
18 clinician and a full time elementary principal. Most of the
19 courses and programs have been coordinated and upgraded.

20 An entirely new adult education program has been instituted
21 for the adults in the area.

22 There appear to be very few problems regarding the integra-
23 tion of Colstrip project-related students with the permanent
24 resident student body. This extends also to the Indian children
25 attending schools. The children from project-related families
26 and the Indian children actively engage in extracurricular activi-
27 ties along with the rest of the student bodies. Dating and mixing
28 at school functions such as dances have likewise presented no

1 problem with the students mixing together the same as in any
2 other school system. I have noted no increase in vandalism in
3 the school and I would judge it approximately the same as in
4 other schools with which I am acquainted. There has been no lack
5 of applications for teacher vacancies during the period that I
6 have been at Colstrip.

7 It is my opinion that the increase in the school enrollment
8 has not adversely affected the educational opportunities; in
9 fact, one of the reasons for our being able to offer a more com-
10 prehensive and expanded program in the school system is because
11 of the increase in enrollment.

1 HEARINGS EXAMINER: You may cross examine, Mr.
2 Sheridan. I guess you're going to offer your exhibits.

3 MR. BELLINGHAM: We offer into evidence Exhibits
4 116, 116-A and 116-B.

5 HEARINGS EXAMINER: Very well. Mr. Sheridan.

7 EXAMINATION OF THOMAS L. McKEOWN

8 Cross, by Department of Natural Resources and Conservation

9 By Mr. Sheridan:

10 Q Mr. McKeown, you were first hired by the Colstrip School
11 District in 1973, correct?

12 A 1973, yes.

13 Q Prior to that time, what familiarity did you have in the op-
14 erating sense with the Colstrip School District?

15 A Prior to the time I went to the Colstrip district I had no
16 relationship with its operations.

17 Q It is also true, isn't it, Mr. McKeown, that your wife is
18 presently an employee of the Bechtel Corporation at Colstrip?

19 A No, she is not an employee of the Bechtel Corporation.

20 Q Has she held any employment for the applicants on any phase
21 of the Colstrip project?

22 A She was employed by the Bechtel Corporation at one time and
23 now is employed by Montana Power.

24 Q What was her employment with Bechtel?

25 A She worked in the accounting office, I believe.

26 Q For how long?

27 A Gee, I don't know. I have no idea.

28 Q What is she doing for Montana Power now?

1 A She is an accountant with Montana Power.

2 Q What is your job for the school district?

3 A Pardon?

4 Q What is your job for the school district?

5 A My job is superintendent of schools.

6 Q Are you sort of the trouble shooter for the school district?

7 A Well, I suppose we look out for troubles that may develop but
8 my main job is to operate the school district in an efficient
9 manner.

10 Q As superintendent of the school district, I'm sure then that
11 you have some responsibilities for making application for
12 funds for the school, for bonding issues and so forth; is
13 that correct?

14 A Yes.

15 Q Has the school district made application for approximately
16 2.6 million dollars in coal impact funds?

17 A Has the district made an application? We are in the process
18 of making that application. We just received the pre-appli-
19 cation forms Monday of this week and the typist has them at
20 the present time.

21 Q Are you familiar with the criteria for making application for
22 those funds?

23 A Yes.

24 Q What are the three primary criteria?

25 A Well, you have to establish a need for the funds. There were
26 five criteria, I think, in all. I don't recall all of them.
27 The availability of funds was another one.

28 Q The degree of local effort, would that be another one?

1 A Pardon?

2 Q Would the degree of local effort --

3 A Right. That's right.

4 Q And also the severity of impact would be another one, wouldn't
5 it?

6 A Right.

7 Q What severity of impact are you going to use in your appli-
8 cation to justify your eligibility for receipt of 2.6 million
9 dollars in impact funds?

10 A Within that elementary district we have had -- taking the
11 base year with the beginning of coal development, the re-
12 opening of the mines in the Colstrip area in 1968 -- I believe
13 the state uses '72 for the base year -- but starting in 1968
14 I believe we have had something like 570 percent increase in
15 elementary enrollment.

16 Q So there has been a substantial impact on the Colstrip school
17 district.

18 A Right.

19 Q Is there any plan now pending by the school district to apply
20 for additional impact funds beyond the 2.6 million dollar
21 funding in the event 3 and 4 are allowed to proceed?

22 A At this time we haven't received any information on 3 and 4.
23 We haven't even talked about application grants in case of
24 3 and 4.

25 Q You know that 3 and 4 are planned to be installed, don't you?

26 A I know that you're supposed to make a decision on it here.

27 Q In the event 3 and 4 are allowed, will there be a requirement
28 in your opinion to apply for additional impact funds beyond

1 the 2.6 million dollars we have discussed?

2 A I suppose it would depend on the amount of impact we would
3 have and the need that might arise within the district.

4 Q What impact have you projected in the event 3 and 4 are
5 allowed to proceed?

6 A We have not projected any impact.

7 Q Have you considered the potential impacts at all by the allow-
8 ance of 3 and 4?

9 A Pardon?

10 Q Have you considered potential impacts for just basic planning
11 purposes in the event 3 and 4 are allowed to proceed?

12 A No, we haven't considered any.

13 Q In your exhibit setting forth the mill levy rates -- I think
14 it's 116-A and 116-B -- do you have those before you?

15 A Yes.

16 Q Do the mill levies which are reflected in 116-A and 116-B
17 include the millage that will be levied to retire the school
18 bonds approved last fall?

19 A No.

20 Q What is the extent of those millage rates, if you know?

21 A I don't have the exact amount on those millage rates. Of
22 course they change from year to year depending upon the in-
23 terest rate and, of course, the amount of the principal paid.

24 Q Well, let's look at 116-A, sir. For the bond that was passed
25 last year, what would you estimate the increase above the
26 millage rate for 1975-1976 would be to retire those bonds?

27 A In the high school or elementary district?

28 Q Well, 116-A is the high school, isn't it?

1 A I would think in the neighborhood of 5-1/4 mills.

2 Q And what would be the millage increase for the elementary
3 school district beyond 1975-1976 for Exhibit 116-B?

4 A Approximately 7 mills. Maybe a little over 7.

5 Q So, in the real world, starting about mid-year, we are talk-
6 ing about a millage rate of 13 or 14 for the elementary
7 school district and a millage rate of about 16 to 17 for the
8 elementary school, aren't we?

9 A For next year?

10 Q Yes.

11 A Not necessarily so because your taxable valuation might
12 change in both districts.

13 Q Well, the taxable valuation has gone up a great deal, hasn't
14 it?

15 A It has increased, yes.

16 Q Do you own a home?

17 A Pardon?

18 Q Do you own a home at Colstrip?

19 A I have a home, yes.

20 Q Have your taxes gone up?

21 A No, the taxes went down.

22 Q By how much?

23 A Well, they were 124 last year, I believe -- 124 mills -- and
24 if I remember correctly, this year -- I haven't got the
25 assessed valuation on it yet but for this year it will be
26 around 98 mills.

27 Q Has the assessed valuation gone up on your house?

28 A I hope not. It's a trailer house so it should depreciate.

1 Q Just my figures show that your total operating budget from
2 1973 to 1975 has increased some \$304,000.00. That's a pretty
3 substantial increase in the budget, is it not?

4 A That is a substantial increase, yes.

5 Q Especially in view of the fact that your budget has more than
6 doubled in the last four years, hasn't it?

7 A In the high school district it has doubled and considerably
8 more than that in the elementary, yes.

9 Q How much funding has been provided you by Western Energy
10 Company or the Montana Power Company or Pacific Power and
11 Light Company or any of the other applicants for use by the
12 school district, the expense of which will be assumed by the
13 school district commencing June of 1976 or thereafter?

14 A How much money have they given us?

15 Q How much funding has been provided the school district by
16 equipment, materials or facilities by any of the applicants
17 or the Western Energy Company?

18 A The only funding in that case would be the facilities provided
19 in which the utility companies provided eight classrooms --
20 these would be relocatables--and one office area and this year
21 they provided us with one trailer house and we also had the
22 use of the cafe area in the new shopping center. That is the
23 only funding, direct or indirect by the companies.

24 Q Are there facilities which you have been using in the school
25 district, the operational expenses for which have been paid
26 for by the power company, the applicants or the Western Energy
27 Company?

28 A The only one where we would have where any maintenance and this

1 type of thing might be the lights and heat in the cafe area
2 of the shopping center. All the rest, the maintenance and
3 operation and so forth of the other units are carried by the
4 district.

5 Q How was the money raised to finance the shopping center at
6 Colstrip?

7 A I didn't have anything to do with the financial operation of
8 the shopping center, so I just simply do not know.

9 Q You haven't heard that it was financed by industrial revenue
10 bonds?

11 A I have heard this.

12 Q Do you know?

13 A What?

14 Q Do you know or not?

15 A No, I haven't talked to any of the officials about it or any-
16 thing else. I'm not that familiar with it.

17 Q Have you had any problems recently with the physical plant
18 for the Colstrip school district?

19 A A year ago we had considerable trouble with our heating system
20 within the old building, which also heats the addition that
21 was put on in 1966. This heating system was replaced this
22 last summer and fall and that's the only problems we have had.

23 Q Have you had any leakage of water in the mobile classrooms?

24 A We have had some leakage in the hall areas of the relocatable
25 classrooms. I don't recall of any leakage within the class-
26 rooms themselves.

27 Q What classes are in the -- or what grade students are taking
28 their instruction in classrooms presently located in the shop-

1 ping center?

2 A We have third, fourth and fifth over there, I believe it is.

3 Q Are those classrooms completely enclosed or are they parti-
4 titioned?

5 A Neither. It's a wide open area and it's educationally not a
6 very sound area. We are not happy with it but it's a wide
7 open area and the only partition we have between those stu-
8 dents would be a chalk board or a cork board.

9 Q In fact, those partitions don't go all the way from the floor
10 to the ceiling, do they?

11 A Oh, no, they're -- the total height of the partition itself
12 I believe is four feet.

13 Q And you can sit in one classroom and hear the teacher talking
14 in another classroom, can't you?

15 A Yes, that's very true.

16 Q You have had insulation falling out of the ceiling in the
17 shopping center, too, haven't you?

18 A I think there was one occasion when some of it came loose and
19 came down.

20 Q Are you aware of any complaints from the school children that
21 those with allergies have been having trouble as a consequence
22 of the insulation falling from the ceiling?

23 A No, neither from the students or parents.

24 Q You personally have not been aware of this?

25 A Right.

26 Q Have you had any trouble with the water system in the main
27 school?

28 A As part of the heating system we had that problem. We have had

1 one drain -- we have had some problems with one drain and
2 also had some problems with the domestic water supply within
3 the system, too.

4 Q What has been the problem with the domestic water supply with-
5 in the system?

6 A I expect that -- construction of that building was in the
7 early '40's and when we take a pipe sample now the inside of
8 the pipe is completely corroded and plugged, and these pipes
9 are just giving out and a leak will spring and it will just
10 rust through the pipe.

11 Q Do you think the blasting at the mine had any effect on the
12 water system?

13 A We have had no indication that it had any effect.

14 Q Have you had any reports of blasting and consequent problems
15 with the water system?

16 A Not that we can identify particularly to the blasting area.
17 These things may come up and we may discuss them but we haven't
18 found any yet that broke when a blast has occurred.

19 Q At the moment, the way the classrooms are located in the shop-
20 ping center, you have students regularly walking across the
21 street, don't you?

22 A The entrance to town.

23 Q Can you hear the mine blasting in the classrooms now?

24 A Oh, yes.

25 Q Do you feel any tremors in those classrooms when there is
26 blasting?

27 A You can feel or hear an air blast and you can also feel tremors
28 once in a while.

1 Q Can you tell me, sir, what percentage of the students about
2 to graduate intend to go to college that are in your system
3 now?

4 A I don't have that information, no.

5 Q Last year, how many went on to college that graduated?

6 A I don't have those figures.

7 Q Do you keep percentages on that?

8 A The counselor would and the high school principal, yes.

9 Q As superintendent of schools that's not your job, right?

10 A Those people report to me but I don't have that information
11 here.

12 Q Have you familiarized yourself with the college aptitude en-
13 trance examination scores made by your students in the last
14 three years?

15 A No, that's -- the high school -- the guidance counselor takes
16 care of that and also the high school principal. They have
17 reported some scores to me on different aptitude tests, also
18 on the Army test that's given in that area.

19 Q What is your average AFPT scores for the Army?

20 A I can't give you the average. I can tell you this, the re-
21 cruioter was in and talked with the guidance counselor and he
22 informed me that the recruiter was very happy because we had
23 scored out one of the higher schools in the area.

24 Q I suppose with the modern volunteer Army any new man makes a
25 recruiter happy.

26 A I have no idea about that.

27 Q In your statement, sir, you make much to-do about the provision
28 for help for remedial reading. Now, your school district has

1 afforded remedial reading classes long before the last two
2 years, hasn't it?

3 A I think at one time they had, back under one of those title
4 programs, they had a remedial type reading program.

5 Q Sure, as far back as 1964, right?

6 A I don't know what year.

7 Q Wasn't speech given in the 1950's?

8 A Not that we could find on any records. Now, it could be but
9 records were hard to come by within that district.

10 Q How about business law being taught in 1966?

11 A I have no idea about that either.

12 Q How about bookkeeping being taught for a number of years prior
13 to the last two, three years?

14 A Don't know that either.

15 Q And isn't bookkeeping about the same thing as business mathe-
16 matics?

17 A No, not necessarily.

18 Q Wasn't business mathematics taught in your school district
19 five years ago?

20 A I have no idea. I wasn't there five years ago and the only
21 thing I can go on is the records that did exist at that time
22 that we could get from the clerk and from the secretary.

23 Q What's advanced home economics?

24 A That's an advance course in home economics. Normally, you
25 would have one or two years. We had an advanced course in
26 home economics.

27 Q Isn't it true, sir, that your school in the last five years
28 has dropped the courses of Latin, journalism and German?

1 A Well, I don't know what they did five years ago. I do know
2 that we never had any Latin since I have been there.

3 Q Are the courses of counseling and teachers' assistance pro-
4 gram required by state law?

5 A Counseling is within the accreditation standards for the state
6 of Montana. This is required at the high school level and is
7 recommended at the elementary level. We did have a counselor
8 at the elementary level a year ago. His position was not
9 filled this last year. We hope to get it back in this next
10 year. The teachers' assistance program is not -- we provided
11 it for those people that would be interested in possibly
12 future teacher training and it's not required by the state.

13 Q Looking at your Exhibit 116, you have the number of teachers
14 as 17.4. Now, which way did you go -- to 18 or to 17?

15 A The 17.4 is correct.

16 Q Who is the .4 teacher?

17 A A speech teacher, and that teacher -- we have her 6/10ths of
18 the time and she is on a contract from the Montana Easter Seal
19 Society and the rest of the time she's with Hysham. She
20 actually works for our district as a part of special education.

21 Q You've actually got 18 teachers on the payroll, right?

22 A Right.

23 Q Do you have more than 18 teachers on the payroll?

24 A In the high school?

25 Q Well, you just show me the enrollment of School District 19
26 on Exhibit 116 and I don't know whether that's just the high
27 school or --

28 A 17.4 in the high school and 25.2. The total would be 43.

1 Q Oh, I see, you have two columns there. One is high school
2 and the other is the elementary school.

3 A Right.

4 Q Of the 17.4 you refer for the high school, do you actually
5 have more than 18 teachers on the payroll?

6 A No, those are certified personnel -- 17.4.

7 Q And insofar as the elementary school is concerned you have
8 26 teachers on the payroll?

9 A It's 25.2.

10 Q Well, is that .2 on the payroll or not?

11 A The .2 is on a contract with the Easter Seal Society. We
12 don't actually -- that contract is run through the Hysham
13 school and it's on a shared basis, so actually she's not on
14 our payroll.

15 Q I see. Well, if I just wanted to ask you how many different
16 teachers, regardless of who pays for them, were available to
17 instruct students, counsel students, or perform administrative
18 duties or whatever in the high school district, what would
19 the number be?

20 A That would be 18 in the high school district, certified per-
21 sonnel, and 26, of course, in the elementary.

22 Q O.K. You make a statement on page 6 of your written testimony
23 that the children from -- line 25, pardon me -- that the
24 children from project-related families and the Indian children
25 actively engage in extra-curricular activities along with the
26 rest of the student body -- is there anything remarkable about
27 that?

28 A Not particularly.

1 Q You have noted no increase in vandalism in the school. Have
2 you kept apprised of the juvenile crime rate in Rosebud coun-
3 ty?

4 A No, I'm not up on those statistics as far as the county level
5 goes. I will say this, we have had very little vandalism in
6 our system.

7 Q Approximately how much vandalism did you have last year?

8 A Well, we lost a total of -- maybe in the neighborhood of ten
9 windows or something like that.

10 Q What did you lose the year before?

11 A Oh, I would say approximately the same number -- maybe less,
12 maybe more, I don't know, but very little.

13 Q You didn't attach a dollar amount to the vandalism done in
14 the school for any particular year though?

15 A No, we don't have a dollar amount.

16 MR. SHERIDAN: I have nothing further.

17 HEARINGS EXAMINER: Mr. Meloy.

19 Cross, by Northern Cheyenne Tribe, Inc.

20 By Mr. Meloy:

21 Q Mr. McKeown, I think somewhere in your statement you tell us
22 that there are some Indian -- Northern Cheyenne Indian child-
23 ren, or at least some Indian children in your high school; is
24 that correct?

25 A We have Indian children in both the elementary and the high
26 school.

27 Q Do you know what percentage of the twenty percent are Northern
28 Cheyennes?

1 A Our high school population runs about twenty percent Indian,
2 predominately Northern Cheyenne.

3 Q When you say predominately, what does that mean in terms of
4 the twenty percent?

5 A Percentage-wise?

6 Q Yes. Fifteen or twenty percent?

7 A We may have, out of the 43 Indian children we have at the
8 high school at the present time enrolled, more or less, I
9 would think that 40, 38, 39, 40--someplace in there--would
10 be Northern Cheyenne.

11 Q Where do most of the parents of these children live?

12 A On the Northern Cheyenne reservation.

13 Q Where do most of the high school students from the Northern
14 Cheyenne reservation go to school?

15 A They go to school in three, possibly four, different schools.
16 A number of them go to school within our school as part of
17 our high school district.

18 Q But that's not what I asked you. What I asked you is, how
19 many -- where do most of the Northern Cheyenne high school
20 students go? 6

21 A I really don't know whether most of them go to St. Labre
22 or Busby.

23 Q Were you here during the cross examination of Mr. Waldon?

24 A I was here.

25 Q Did you listen to that cross examination?

26 A Part of it, yes.

27 Q Did you hear that part which concerned itself with training
28 of skilled workers?

1 A I heard part of that.

2 Q I notice among the curriculum which is new to your school
3 subsequent to June of 1973 you list a number of new programs
4 but among those programs made available subsequent to June
5 of 1973 I can see none which relate to making an unskilled
6 youngster a skilled youngster with regard to the kinds of
7 employment that might be available for them when they grad-
8 uate from high school at the units. Why is that?

9 A Basically, this school for a number of years ran as a college
10 oriented type school. There was no vocational training to
11 speak of within the school and it's still very much that way
12 because we are limited in facilities.

13 Q But when you expanded your curriculum -- and it's important
14 to know that because Mr. Beisel told us that one of the ben-
15 efits to the Northern Cheyenne was that they could attend new
16 programs in your school.

17 A Right. We tried to develop those programs in terms of areas
18 that we could handle at this time, and this would be in the
19 accounting and commercial areas.

20 Q The commercial areas?

21 A Business.

22 Q Is that what area advanced science research is in?

23 A Pardon?

24 Q Well, you say you've got a new program, advanced science re-
25 search.

26 A Right.

27 Q Is that business-oriented?

28 A Not particularly. Not that one, no.

1 Q How about general math II, is that business-oriented?

2 A Moreso than algebra.

3 Q How about advanced home economics?

4 A Pardon?

5 Q Advanced home economics.

6 A Just in a family or a home sense would it be business-orien-

7 ted.

8 Q How about drug education?

9 A Yes, we have drug education in our school.

10 Q Why?

11 A We were awarded a grant two years ago -- or actually it was

12 last year we initiated the program -- and we sent two of our

13 people to the San Francisco and Oakland area for two weeks

14 and they were to come back and initiate a drug program. And

15 we did it because our community -- I don't suppose it's any

16 different than any other community in the state, and I think

17 that we have drugs there just like we would in any other com-

18 munity.

19 Q Why did you qualify for that grant?

20 A Why did we qualify for it? We made application for it.

21 There was no qualifications in terms of need or anything like

22 this. You wrote an application, you submitted it to the

23 state, or through the state to the federal government, and

24 they made the selection.

25 Q How many schools do you know of, of your size, that have

26 drug education programs?

27 A Oh, I think a number of them do. They never all got grants

28 or they didn't receive grants like we did, but at least they

1 have some type of drug education program because right now
2 that's part of the state law.

3 Q Did they apply for the grants?

4 A Pardon?

5 Q Did they apply for the grants?

6 A Did we apply for it? Yes.

7 Q Did the other schools?

8 A Did the other schools? I have no idea. I have no jurisdic-
9 tion over them.

10 Q But if any of them had applied they would have qualified as
11 equally as you?

12 A I didn't hear that question.

13 Q If the other school districts had applied for the drug educa-
14 tion money they would have qualified as equally as you did.

15 A I would presume so.

16 Q Did you submit a written application?

17 A That was a written application.

18 Q Do you have that written application with you?

19 A No, I do not.

20 Q Can you supply me with a copy of that written application?

21 A I would think so. That application was made by our counselor
22 and through the high school principal and I would presume
23 they would have a copy of it.

24 MR. MELOY: Mr. Bellingham, may I have that?

25 MR. BELLINGHAM: We'll see if we can find it.

26 MR. MELOY: I have no other questions, Mr. Davis.

27 HEARINGS EXAMINER: Any re-direct?

1 Re-direct, by Applicants

2 By Mr. Bellingham:

3 Q Mr. McKeown, you testified relative to the drug program that
4 was instituted. Have you had any indication as to its suc-
5 cess?

6 A Yes, after they went into the training program -- the staff
7 did for two weeks -- when they came back there was a recom-
8 mendation from the people at the federal level that was
9 carrying it on -- that they come back and initiate a drug
10 program with the youth of the community, and these people
11 were to get together and determine their own type of a pro-
12 gram that they wanted to initiate. In this case it was a
13 youth center within the community of Colstrip.

14 Q Have you had any report from the people instituting the drug
15 program as to the possible results?

16 A I have talked with Jack Urban who runs the center, as well as
17 the high school guidance counselor. Within the school we
18 have no jurisdiction or control over the center, but they have
19 told me that they have seen what they believe is a reduction
20 in the use of drugs, at least some forms of drugs, in the
21 Colstrip area.

22 Q You indicated in regard to the tests that the armed forces
23 had conducted down there -- do you have any knowledge of any
24 other results of any of the tests that have been given to
25 your students?

26 A In the last two years we have carried on the S.R.A., which is
27 a test on basic skills at both the elementary and high school
28 levels for placement at the high school and we have -- in

1 general terms the results of those tests are -- tests at the
2 elementary level and also at the high school level would in-
3 dicate that we are at or above the national level.

4 Q Now, then, you mentioned your high school district. Does
5 this high school district include the town of Lame Deer?

6 A Yes.

7 Q Does it include the town of Ashland?

8 A Right.

9 Q Where are those towns located? Are they on the Northern
10 Cheyenne Indian reservation?

11 A Lame Deer, of course, is on the Northern Cheyenne reservation,
12 located some 22 miles south of Colstrip. Ashland is located
13 some 20 miles more or less east of Lame Deer and it is on the
14 very edge of the Northern Cheyenne reservation.

15 Q Is that within your school district?

16 A It's within our school district.

17 Q How about Birney?

18 A Birney is within our high school district.

19 Q Where is it located?

20 A Birney is located some 25 miles south of Lame Deer.

21 Q Is it in the Northern Cheyenne Indian reservation?

22 A You have two Birneys within that area. You have the town of
23 Birney, the Birney townsite, which is located off the reserva-
24 tion some eight miles south. You also have the Birney day
25 school area which is located on the reservation.

26 Q Well, is there any portion -- I don't know if you mentioned
27 it -- is there any portion of Birney then that's in the
28 school district?

1 A All that is within our high school district.

2 MR. BELLINGHAM. No further questions.

3

4 Re-cross, by Department of Natural Resources and Conservation

5 By Mr. Sheridan:

6 Q Mr. McKeown, how many drug arrests have been made so far
7 this year in Rosebud county?

8 A I have no idea.

9 Q How many high school students have been involved with drug
10 charges?

11 A I couldn't give you any number on that.

12 Q Are you familiar with statistics on drug usage in terms of
13 arrests in Rosebud County, for the community, for the high
14 school students last year?

15 A No, they never provided us with that information.

16 Q Or the year before, right?

17 A No.

18 Q The S.R.A. test that you give your elementary school students
19 are basically to show whether or not they can go' on to high
20 school; isn't that right?

21 A No.

22 Q What do you give basic school tests to elementary school stu-
23 dents for?

24 A Why do we give them?

25 Q Yes.

26 A We want to find out -- I suppose one of the main reasons we
27 give them is to try and find out where our weaker areas are
28 within our curriculum, and we do have one weak area within our

1 curriculum but we are still testing above the national norm
2 and that area happens to be mathematics and the fields of
3 computation.

4 MR. SHERIDAN: Nothing further.

5 HEARINGS EXAMINER: Mr. Meloy?

6 MR. MELOY: No further questions.

7

8 Re-re-direct, by Applicants

9 By Mr. Bellingham:

10 Q Are you doing anything about the curriculum insofar as math-
11 ematics is concerned that you testified to?

12 A Yes, we are in the process now -- after making our evaluation
13 now, we are in the process of evaluating materials to imple-
14 ment this next year.

15 HEARINGS EXAMINER: Anything further?

16 MR. BELLINGHAM: Nothing.

17 HEARINGS EXAMINER: You are excused, sir. Thank
18 you.

19 (WITNESS EXCUSED)

20 HEARINGS EXAMINER: Where are we, gentlemen? What
21 do you want to do now?

22 MR. PETERSON: Well, I would like to continue be-
23 cause we have a gentleman here who has to meet a Western
24 Airlines flight this afternoon.

25 MR. SHERIDAN: I would rather we proceed.

26 HEARINGS EXAMINER: Mr. Meloy, am I correct in that
27 you have no cross of the next witness, Mr. Wahlquist?

28 MR. MELOY: That's right.

1 HEARINGS EXAMINER: How about Mr. Schmechel? Will
2 you be here for him? Well, you maybe don't have to
3 worry about that. He will testify later on this after-
4 noon.

5 MR. MELOY: Yes, I have a couple of questions for
6 Mr. Schmechel.

7 HEARINGS EXAMINER: Let the record show that Ex-
8 hibits 116, 116-A and 116-B are admitted without ob-
9 jection.

10
11 BRENT T. WAHLQUIST, called as a witness by the Applicants, having
12 been first duly sworn upon his oath, both as to his written direct
13 testimony and as to the oral testimony to follow, was examined
14 and testified as follows;

15
16 MR. PETERSON: In offering the testimony of Mr.
17 Brent T. Wahlquist, I have a couple of corrections to
18 read into the record. On page 6, line 5, the word
19 "sagebrush" has been misspelled. On line 27 of the
20 same page, strike the word "to". Or page 11, line 2,
21 the word "the" should read "and" between the word "breeds"
22 and "winters".

23 HEARINGS EXAMINER: There should be an "and" in-
24 serted there?

25 MR. PETERSON: Yes.

26 HEARINGS EXAMINER: Instead of "the"?

27 MR. PETERSON: Yes. And on line 5 of page 11 -- no,
28 that isn't the right page. Page 19, rather, at line 15,

1 the word "two" should be stricken and inserted in lieu
2 thereof the word "a", so that it reads: "Also a short
3 connection. . ."; "connection" should be singular. On
4 line 16 the word "were" should be "was". On page 22 at
5 line 15, "Exhibit 1" should read "Exhibit 92". And on
6 page 26, line 5, the figure "3" should read "4", and
7 the word "somewhat" should read "significantly". On
8 page 30, line 25, in between the words "are opened" on
9 that line there should be inserted the word "left", so
10 that the sentence reads, ". . .the roads are left opened
11 or closed." With that, we move the introduction of
12 Exhibit 92 and Mr. Wahlquist is ready to testify on
13 cross examination.

14

15 (THE WRITTEN DIRECT TESTIMONY OF MR. BRENT T. WAHLQUIST
16 WAS DIRECTED TO BE INSERTED AT THIS POINT.)

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1 TESTIMONY OF BRENT T. WAHLQUIST

2

3 My name is Brent T. Wahlquist and my business address is
4 Westinghouse Electric Corporation, Environmental Systems Depart-
5 ment, P. O. Box 1899, Pittsburgh, Pennsylvania. I am Manager of
6 Transmission Systems for the Environmental Systems Department and
7 have held this position since August, 1974. My duties include
8 managing environmental analysis of transmission lines, strip
9 mines and the terrestrial impacts of power plants. This includes
10 designing and managing baseline studies, supervision of technical
11 input and report production, commitment of funds for material
12 and services and allocation of manpower. From March 1972 to the
13 time of obtaining my current position, I was a Senior Scientist
14 in the Environmental Systems Department. During my employment
15 with the Environmental Systems Department I have managed multi-
16 disciplinary analyses in Montana, Utah, Nevada, California,
17 Illinois, New Mexico, Arizona, Wisconsin, Puerto Rico, Hawaii
18 and South Carolina. From October 1971 to March 1972, I was with
19 the Westinghouse Electric Corporation, Research Laboratories.
20 During this time I was concerned with trace metals in solid waste
21 and worked with the Environmental Systems Department on ter-
22 restrial concerns at the proposed Aguirre Generating Complex in
23 Puerto Rico.

24 I received a Bachelor of Science degree in botany from
25 Brigham Young University in 1967, a Master of Science degree in
26 botany from Brigham Young University in 1969 and a Ph.D. degree
27 in biology from New Mexico State University in 1971.

28 The purposes of this testimony are to describe the approach

1 used and to summarize information obtained and conclusions reach-
2 ed relative to an environmental analysis for a transmission
3 system to connect the Colstrip Generating Station with the Hot
4 Springs substation.

5 The objectives of this environmental analysis were (a) to
6 locate and analyze possible transmission line routes between the
7 Colstrip Generating Station and the Hot Springs Substation, (b)
8 to select from these a recommended route and environmentally
9 acceptable alternative routes, and (c) to determine the environ-
10 mental, social and economic impacts of construction and opera-
11 tion of the proposed lines. Included in this testimony are a
12 characterization of physical, biological and cultural environ-
13 ment features in a defined study area, selection of routes for
14 analysis, analysis of selected routes, an assessment of the
15 transmission system environmental impact and compatibility and
16 a ranking of routes for environmental compatibility.

17 The analysis was developed by an inter-disciplinary team
18 under my supervision. Information sources included ground and
19 aerial surveys by Westinghouse personnel and consultants,
20 contacts with various industries and local, county, state and
21 federal agencies and departments, literature, maps and location
22 and design input from The Montana Power Company and Charles T.
23 Main, Inc.

24 Westinghouse personnel were supported by local consultants
25 familiar with the study area within their respective disciplines.
26 These consultants provided much of the information about the
27 existing environment and gave assistance on analyses of the
28 various routes.

I will now describe in general terms the methodology used
in this environmental analysis. The first step was to define a
basic study area. The study area boundary was defined by select-
ing that general area beyond which it was judged impractical to
consider a transmission line routing. The study area as defined
and investigated includes the general area from Broadview to
Colstrip and begins at a point due east of Colstrip on Rosebud
Creek. The southern boundary runs southwest 10 miles to a point
on Millens Creek east of Hardin, from there to Laurel, Laurel to
Bozeman, Bozeman to Buxton, near Butte. Buxton to Superior and
Superior to Thompson Falls. The northern boundary runs from
Rosebud Creek to Forsyth, Forsyth to Lewistown, Lewistown to
Great Falls, Great Falls to Wild Horse Island and Wild Horse
Island to Thompson Falls.

The second step was to select local consultants to
participate in the analysis of the study area. A summary of the
physical, biological and cultural environment in the study area
follows.

The physical environment imposes certain constraints on
transmission line siting. In order to determine the most
feasible route as well as alternate route segments of the
physiography, geology, mineral resources, soil science, seis-
mology, hydrology and climatology were studied.

The land forms of an area are an important consideration
for transmission line routing from an environmental viewpoint.
Areas of rough terrain, steep slopes and great relief should be
avoided if possible in favor of gentle slopes, flat areas or
areas with gradual change in relief from an engineering and cost

1 point of view as well as environmental considerations. Land-
2 slide hazards, most mineral resources, severe erosion hazard,
3 important watersheds and severe weather affecting corona losses
4 were all associated with the mountainous physiographic features.
5 For all elements of physical environment studied, highest
6 sensitivity to transmission line construction and operation
7 were found with the mountainous and high altitude areas except
8 for seismology. Seismic events also occur primarily in the
9 mountainous portion of the state. However, they occur in the
10 intermontane valleys as well as areas of great relief.

11 While the greatest impact on the physical environment
12 appeared to be in the more mountainous regions, these impacts
13 such as landslides, erosion and siltation can be mitigated
14 through careful construction practices.

15 The biological environment was evaluated to determine
16 its sensitivity to the transmission line construction and opera-
17 tion and to determine if it should be a factor in line siting.
18 This evaluation included major plant communities and wildlife.

19 Major plant communities were mapped using existing sources
20 augmented by our own reconnaissance. Community sensitivity was
21 determined based primarily on two factors. There were: (1) the
22 amount of clearing required, i.e., the extent of disruption of
23 the community, and (2) its regeneration capacity, i.e., its
24 ability to regenerate itself after disturbance and the amount of
25 time required to do this.

26 The nine plant communities identified are each extensive
27 and varied. Each exists under a wide range of conditions,
28 physiography, soil management practices, etc. For these reasons,

1 the sensitivity to impact within each major community type
2 varies. Generalizations can be drawn, however, which do have
3 bearing on the selection of a transmission corridor.

4 The high altitude plant communities (including alpine
5 meadows and subalpine forests) are sensitive to construction
6 impact. The short growing season, moist immature soils and
7 remoteness of alpine areas essentially eliminate them from
8 consideration as possible transmission line routes. Subalpine
9 forests survive a short growing season and long, cold winters;
10 therefore, growth is comparatively slow. Many of the pioneer
11 species that stabilize the disturbed areas of lower forests do
12 not survive, making recovery much slower.

13 The Douglas fir forest and the western ponderosa forest
14 are much more resilient than the subalpine forest, with the
15 Douglas fir forest possibly being less sensitive than the
16 western ponderosa forest because of greater precipitation and
17 seedling availability. The trees of the eastern ponderosa
18 forest and the ponderosa savannah have deep root systems, thick
19 bark and scales over buds, enabling them to survive in areas
20 receiving less than 14 inches of rain. However, new seedlings
21 may become established in only one out of five to ten years or
22 more when optimum conditions such as above-average precipita-
23 tion, fire and a good seed crop coincide. This tends to make
24 the eastern ponderosa forest, the savannah and the drier areas
25 of the western ponderosa forest more sensitive to disruption
26 than the Douglas fir forest.

27 Riparian woodlands are diverse communities that are very
28 important to wildlife. However, much of this community type

1 has been eliminated for agriculture. The line can generally
2 bridge smaller riparian zones. The potential impact of access
3 roads crossing small or intermittent streams can be minimized
4 by careful construction at stream crossings.

5 The grasslands and sagebrush communities can be con-
6 sidered less sensitive to construction activities than the
7 wooded areas. Because sagebrush is to a large extent both a
8 pioneer and climax species, the sagebrush community tends to be
9 less sensitive to disturbance than communities going through
10 several stages from bare ground to climax forest or from bare
11 ground to grassland.

12 Sensitivity to construction impact is closely inter-
13 related with soil conditions, with the deep, rich, well-drained
14 soils probably being least sensitive to disturbance. However,
15 because these limited areas are the most productive agricul-
16 turally, the foothills would be preferable to the valley bottoms.
17 Portions of the central grasslands, the foothill sagebrush, the
18 intermontane valley and foothill grasslands could be classified
19 in this category. Thin mantled, undifferentiated soils, terraces,
20 stony or gravelly soils and steep broken highlands are more
21 sensitive. Much of the forest and alpine vegetation occurs on
22 such soils. Areas of steep slopes are especially sensitive if
23 soil and vegetation are not in equilibrium and erosion is al-
24 ready present. Likewise, clear-cut forest areas and rangelands
25 in poor condition are more sensitive than those in fair to good
26 condition.

27 Wildlife is ~~is~~ a concern in transmission line siting for
28 two principal reasons: increased access into previously remote

1 areas through access road construction and critical habitat
2 destruction. Concern has also been expressed that the physical
3 presence of transmission lines may affect the movement and
4 migration patterns of wildlife including birds.

5 Elk occur in the Little Belt, Big Belt, Crazy, Castle
6 and Bridger Mountains and in all mountain ranges west of these
7 within the study area. Elk thrive best during the shrub stages
8 of plant succession and limited clearing can be beneficial.
9 Mule deer are presently distributed throughout the state in most
10 of the topographical and vegetational zones. Mule deer general-
11 ly prefer open areas with escape cover interspersed.

12 Whitetail deer are presently distributed along most of
13 the river bottomlands of the state and throughout the area west
14 of the Continental Divide. Whitetail deer habitat west of the
15 Divide usually consists of closed canopy Douglas fir-ponderosa
16 pine forests on a south or southwest exposure where fir thickets
17 with south or southwest exposure provide both cover and browse
18 during the winter. East of the Continental Divide, whitetail
19 deer habitat is generally the deciduous vegetation of drainage
20 bottomlands and is often associated with agriculture.

21 Bighorn sheep are found in several scattered mountainous
22 locations in the study area. Good sheep habitat requires a
23 remote area with little competition from livestock or other big
24 game species and steep rocky ledges interspersed with open
25 slopes. Mountain goats inhabit steep, rugged, often glaciated
26 areas which range from 5,000 to 11,000 feet high in Montana.
27 In winter goats move from summer ranges either to lower eleva-
28 tions or to higher wind-swept ridges. Also moose are found

1 in the more remote mountainous locations. Being fairly adapt-
2 able, moose inhabit some spruce-fir, Douglas fir and deciduous
3 forests as well as willow and aquatic areas.

4 Black bear are distributed throughout the timbered
5 portions of western and central Montana in a variety of habitats,
6 with spruce-fir forests probably used most. Black bears avoid
7 areas of human disturbance, particularly recently logged areas.
8 Within the study area, grizzly bears are found in the mountains
9 of the Mission Range and the Bob Marshall Wilderness Area.
10 Grizzly bears are less tolerant of human intrusion than black
11 bears and generally inhabit mountainous areas that provide rock
12 and snow slides, alpine meadows and heavy timber. Mountain
13 lions also are found in the rugged mountainous areas of Montana,
14 usually in steep rocky locations.

15 In the study area, sharptailed grouse and sage grouse
16 are distributed primarily east of the Missouri River with sharp-
17 tails also occurring in several intermontane areas west of the
18 Missouri. Sage grouse are found primarily in association with
19 the sagebrush-grasslands, whereas sharptails prefer wetter
20 upland-mixed rangelands. Forest grouse include the blue, ruffed
21 and spruce grouse. These are forest-dwelling species found
22 primarily west of the Missouri River but sometimes also in
23 mountainous area farther east. Ptarmigan is found only in the
24 alpine areas.

25 The ringnecked pheasant and Hungarian partridge are the
26 two most important introduced species. The pheasants are
27 distributed along many river bottomlands throughout the study
28 area, whereas Hungarian partridges are found primarily east of

1 the Missouri. Merriam's turkeys and chukar partridges are
2 also present in small numbers in the study area.

3 There are 33 species of migratory waterfowl that pass
4 through, breed or winter in the state of Montana. The mallard
5 duck and the Canada goose are the two most important game
6 species. The eastern portion of Montana is in the Central
7 Flyway, and the western portion is in the Pacific Flyway.
8 Almost all water areas within the study area can be considered
9 as potential or actual water fowl habitats.

10 The golden eagle and the bald eagle are two protected
11 species of interest in the study area. Both species breed and
12 winter in remote areas and are sighted only occasionally. The
13 bald eagle occurring in Montana is principally the northern
14 subspecies. The southern bald eagle (endangered) does not
15 occur in Montana except possibly for an occasional wandering
16 bird. The bald eagle is generally associated with water areas,
17 while the golden eagle is generally associated with the more
18 rugged terrain.

19 Species occurring within the study area having an un-
20 determined status are the northern swift fox, the pine marten,
21 the fisher, the wolverine, the Canadian lynx, the ferruginous
22 hawk, the osprey, the Columbian sharptailed grouse, mountain
23 plover and the Yakutat fox sparrow. The swift fox is found
24 only in the open plains of eastern Montana while pine marten
25 and fisher prefer the fir, spruce and hemlock forests of
26 western Montana. The Canada lynx is found throughout forested
27 areas while the wolverine prefers remote areas in high mountains
28 and is often found near the timberline. Ferruginous hawks and

mountain plover habitats are the open rangelands. The osprey occurs along rivers and lakes often building its nest in a dead tree, rock pinnacle or on the ground. The habitat of the sharp-tail grouse is prairie, brushy parklands, open thickets, forest edges and clearings. The fox sparrow may be found in stunted woodlands near timberline, mountain chaparral and forest undergrowth.

Additional status undetermined species which may occur in the study area are the prairie pigeon hawk (migrant), northern long-billed curlew (southwestern Montana) and the western burrowing owl (eastern Montana).

Those species within the study area considered as threatened include the spotted bat, the prairie falcon, the greater sandhill crane, the greater prairie chicken and the grizzly bear. The spotted bat has been found as far north as Yellowstone County, Montana. This bat is found in high cliffs and canyons living in the cracks and crevices during the day. The prairie falcon is wide ranging, inhabiting canyons, open mountains and prairies. The sandhill crane occurs on prairies, grainfields and marshes and also inhabits mountain meadows and tundra in the summer. The habitat of the greater prairie chicken is the tall grass prairie of eastern Montana.

Five endangered terrestrial species identified as possibly inhabiting the area are the peregrine falcon, whooping crane, eskimo curlew, northern rocky mountain wolf and the black-footed ferret. The bird species are migrants through the state. The peregrine falcon and eskimo curlew could be found in any portion of the study area, while the whooping crane

would only be found in the eastern plains area. The peregrine falcon breeds the winters in Montana. The eskimo curlew is an accidental or marginal species. The whooping crane occurs as a migrant only, breeding in Canada and wintering on the Gulf coast of Texas. The northern Rocky Mountain wolf is limited to the remote areas of western Montana. Although this species has been considered extinct, wolves from the former range have been reported in Flathead, Gallatin and Helena National Forests. The wolf is present in small numbers in widely scattered groups. The black-footed ferret is extremely rare. No confirmed sightings have been made in Montana since 1953. This prairie species may occur with prairie dogs in the eastern portion of the state.

The cultural environment and human values must be considered in transmission line routing. Those aspects of the human environment evaluated included general demography, archaeology and history, scenic areas and land use. Land use aspects considered included agriculture, recreation, mining, urbanization, transportation and other transmission lines and special use areas.

Two major land use considerations in transmission line siting are (1) highways and roads which generally are to be avoided according to federal guidelines and (2) other transmission lines which may offer opportunities for paralleling.

Existing transmission lines can affect the location of new lines in two contradicting ways: (1) system reliability requirements may dictate locating new lines away from existing lines, and (2) environmental impact considerations may call for

1 placing new lines as close as possible to existing lines.
2 Because the two lines proposed in this study have an electrical
3 capacity considerably greater than any of the existing lines
4 within the study area, the increased reliability to be achieved
5 by avoiding existing lines is not sufficient to make such
6 avoidance an important factor in locating the proposed lines.
7 Also, because the proposed lines are considerably larger than
8 existing lines, much of the advantage of closely paralleling
9 existing lines to reduce impact is lost. This is particularly
10 true in open flat terrain or in areas where the principal
11 impact is aesthetic. However, in areas requiring extensive
12 access roads or where wildland intrusion is of concern, closely
13 paralleling smaller existing lines can still significantly
14 reduce the impact of new line construction.

15 Another important land use aspect are special use areas
16 which may preclude siting a transmission line through them.
17 These special use areas include such things as national and
18 state forests, wilderness areas, wildlife reserves and ranges,
19 Indian lands and other designated areas. Some of these areas
20 constitute absolute constraints for transmission line siting
21 whereas others are flexible enough for lines to pass through
22 assuming careful coordination with the administrative agency.
23 Among the former, are the wilderness areas and candidate
24 wilderness areas. There are also a number of other roadless
25 areas which although not completely protected by the National
26 Wilderness Act, would require a separate environmental impact
27 statement by the Forest Service. Routing a transmission line
28 across state or national forests, game ranges or Indian lands

1 is legally possible if approved by the administrative agency
2 or council.

3 Preserving archaeological sites is a major considera-
4 tion in transmission line construction. However, because of
5 the localized nature of such sites it is not an important
6 factor in selecting one general corridor over another. An
7 archaeological survey will be conducted once the actual loca-
8 tion of the transmission line has been determined. This will
9 enable mitigating any impacts on archaeological finds by
10 adjusting placement of access roads and towers to avoid such
11 finds in the initial phases of construction.

12 Within the study area are sites of historic signifi-
13 cance. Most of Montana's mining camps, and all of its oldest
14 ones, are in the mountainous western part of the state. The
15 numerous forts of Montana reflect the military and historical
16 development of the state. Some, such as Fort Sarpy in the
17 eastern part of the study area or Henry's Fort near Three
18 Forks or Salish House in the western part of the area, were
19 fur company posts. Some, such as Fort Logan were army posts
20 to protect mining areas. Fort Logan, 17 miles northwest of
21 White Sulphur Springs is listed in the National Register of
22 Historic Places. The St. Ignatius Mission near Dixon in
23 western Montana is of religious interest. The mission church,
24 one of the outstanding landmarks of the area, is decorated
25 with frescoes done by one of the brothers, J. Carignano, in
26 1891.

27 There are also several natural landmarks with historic
28 significance within the study area. One is the National Bison

Range near Dixon in western Montana, which was established
in 1908 for the protection and preservation of the American
Bison. Pompey's Pillar is another landmark of both natural
and historic interest and is included on the National Register
of Historic Places.

Where people live is a concern in transmission line
siting and to the extent practicable, residences are avoided.
Within the rural portions of the study area the population is
clustered in areas of available water and transportation

There are a number of recreational areas that need to
be considered in transmission line siting. The majority of
these are localized sites while a few such as recreational
water ways are linear. Visual resources of the study area of
two major types: mountain scenery and the sweeping vistas
associated with the plains and broad river valleys. Many of
the most important areas are associated with the recreational
sites and special land use areas.

The types of agricultural land use that are most sensitive
to transmission line impacts are dry land farming and
sprinkler irrigated tracts. Dry land farming economics
depends upon efficient use of large equipment which can be
disrupted by a transmission tower. The operation of large
circular irrigation sprinkler systems would be similarly
disrupted. Both of these impacts can be mitigated to a large
extent by careful tower placement. There are some sprinkler
irrigated areas along the Yellowstone River. There is also
limited sprinkler irrigation development near the Missouri
River between Three Forks and Townsend as well as some dry

1 land farming in this area. The major areas of dry land farm-
2 ing are the area around Broadview, southeast of Great Falls,
3 and above the Rimrock Cliffs along the Yellowstone River.

4 Of the factors analyzed within the study area there
5 were few which are of prime importance in transmission line
6 siting and play a critical role in the definition of alter-
7 natives. Many others were of secondary importance but are
8 significant in evaluating one alternative against another.
9 Several factors were considered of minor importance in terms
10 of line routing because environmental impacts to these factors
11 could be reduced through careful construction or operation
12 practices.

13 The three factors that were considered of prime
14 importance were existing transmission corridors, physiographic
15 barriers and special use areas. As previously mentioned, once
16 transmission corridors have been opened, often opportunities
17 for paralleling exist which can reduce the impact of addi-
18 tional lines. Therefore, all existing transmission corridors
19 which could reasonably be used for paralleling between
20 Colstrip and Hot Springs were used to identify corridors in
21 the preliminary analysis.

22 Several portions of the study area constitute partial
23 or absolute constraints because of other land use commitments.
24 The absolute constraints consist of wilderness areas, primi-
25 tive areas, wilderness study areas, and reservoirs too wide
26 to span. Roadless areas require additional detailed analysis
27 before crossing. Areas requiring permission from or coordina-
28 tion with administrative agencies or councils to ensure that

1 transmission line planning is compatible with alternate land
2 use commitments are national forests, state forests, public
3 lands, game management areas, other state lands and Indian
4 lands.

5 Physiographic barriers play an important role in
6 central and western Montana and attempts were made to go
7 between mountains or through lower mountain passes whenever
8 possible. In general, highly scenic areas, ecological sensi-
9 tive biotic communities, some recreational use, high erosion
10 hazards and metallic ore deposits are associated with montane
11 portions of the study area. Urban areas, aquatic recrea-
12 tional sites, high yield irrigation land and scenic areas
13 with broad vistas are associated with the broad river valleys.
14 Open range and dry land farming are associated with the plains
15 and foothills. Therefore, plains, foothills and lower tree-
16 less slopes appear to have the least overall sensitivity,
17 particularly if dry land farming areas can be avoided or
18 spanned.

19 The next step in this analysis was to identify corridor
20 options. The transmission corridors as presented in this
21 analysis defines a belt three miles wide with actual center-
22 line and tower locations being selected on an engineering
23 and environmental basis after detailed aerial photography and
24 reconnaissance along the three-mile-wide belt. The initial
25 factor limiting corridor options between Colstrip and Hot
26 Springs was the requirement for substations in the Billings
27 and Helena areas. The proposed Broadview Substation north-
28 west of Billings will meet the first need, while the Helena

1 Substation could conveniently be located at the point of
2 intersection between the proposed line and portions of the
3 Great Falls-Butte steel tower line. This would limit the
4 need for additional lines in the future should transforma-
5 tion be required for additional power distribution in central
6 Montana.

7 Because of the series of north-south trending physio-
8 graphic barriers between Colstrip and Hot Springs the ap-
9 proach was to identify possible passageways through these
10 physiographic barriers and then link them up. After identi-
11 fying several such passageways on maps, aerial reconnaissance
12 was undertaken to determine which were feasible for trans-
13 mission line siting and to search each physiographic barrier
14 for additional feasible passageways that were not apparent
15 on the maps. Maps studied for this analysis included topo-
16 graphic raised relief, vegetation and political maps showing
17 special use areas. Following initial aerial reconnaissance
18 which was conducted independently by Westinghouse, C. T. Main
19 and Wirth Associates, all possible corridor options suggested
20 from these three sources were pooled onto one map.

21 The first major physiographic barrier encountered west
22 of Broadview is the Crazy Mountain-Castle Mountain-Little
23 Belt Mountain series. There are essentially four possibilities
24 for passing through this region. These are: (1) south of
25 the Crazy Mountains, (2) between the Crazy Mountains and the
26 Castle Mountains, (3) between the Castle Mountains and the
27 Little Belt Mountains or (4) completely north of the Little
28 Belt Mountains. West of this chain lies the Bridger Range-

1 Big Belt Mountain chain, which is much more continuous and
2 offers less obvious passages. Analyzing physiographic, vege-
3 tation and land use maps together with aerial reconnaissance
4 results yielded seven possible corridors across the chain. From
5 south to north, these are: (1) Flathead Pass, which has an exist-
6 ing 230-KV line, (2) the south Fork of Sixteen Mile Creek Canyon
7 between the Bridger Range and Elkhorn Ridge, (3) the Sixteen
8 Mile Creek Canyon, (4) a rolling grassland area about halfway
9 between Sixteen Mile Creek and the Deep Creek Canyon, (5) the
10 Deep Creek Canyon, (6) the pass between Benton Creek on the east
11 and White Creek on the west in the area west of Canyon Ferry
12 Reservoir, and (7) the region north of Helena National Forest.

13 The lines must pass either north or south of Canyon Ferry
14 Lake, the next physiographic barrier running north-south. If
15 south, the lines must afterwards pass either north or south of
16 the Elkhorn Mountains. West of Helena is the Continental Divide.
17 Four crossings were identified as follows: (1) about 5 miles
18 south of McDonald Pass approaching from Chessman Reservoir and
19 continuing on into the Telegraph Creek area, (2) over McDonald
20 Pass, (3) over Mullen Pass, or (4) over Stemple Pass to Lincoln.

21 From the Continental Divide west to Hot Springs the area
22 is primarily mountainous with intermontane valleys and canyons
23 running generally northwest to southeast. Because the section
24 is primarily mountainous and there are some existing northwest-
25 southeast transmission lines, the possibility of paralleling an
26 existing corridor is a major consideration in this region. The
27 alternatives west from the Continental Divide include: (1) fol-
28 lowing an existing corridor in the Clark Fork Canyon from

Garrison to Missoula, (2) following an existing corridor along the Clark Fork from Garrison to Bearmouth and on over the mountains south of Garnet to Kamas Prairie, then establishing a new corridor north into the Jocko River area, (3) establishing a new corridor through the Avon Valley to connect with the existing corridor running through Nevada Valley and then crossing over Jocko Pass to the Flathead Valley, or (4) following the existing corridor through the Lincoln and Nevada Valleys and over Jocko Pass.

From the Missoula area, the lines could follow existing corridors north toward Arlee and Dixon and on to Hot Springs, or a new corridor could be established northwest up Nine Mile Creek and over the pass into Paradise and Plains, from where the lines would follow an existing 500-KV line past Rainbow Lake to the Hot Springs substation. Also two short connections between the Jocko Pass route and the Missoula-Arlee-Dixon route were added to give greater flexibility around the National Bison Range.

After initial reconnaissance alternatives were cursorily evaluated to determine if any could be eliminated because of excessive length with no apparent reduction in impact per mile or obvious excessive impact without being appreciably shorter.

The basis for eliminating some of these alternatives without more detailed analysis was that if all environmental factors were equal the transmission line corridor with least impact would be a straight line between the points of origin and termination. This would involve the least land, require the least amount of access roads, etc. To justify an alternative that is 20 percent

longer the impact on the area crossed must be more than 20 percent less than on the area crossed by the shorter option. Economics also strongly favors the shortest alternative. Therefore, in this preliminary analysis any alternative that involved considerable extra length for little or no apparent reduction in impact per mile was eliminated from further consideration. Also any alternative with excess impact with little or no reduction in length was also eliminated. To the extent practical, however, an effort was made to retain at least two alternatives through any portion of the study area for further analysis, in case problems not readily apparent should develop with one alternative.

Because the alternatives between Colstrip and Broadview were the subject of an earlier hearing, today, I will discuss only those alternatives between Broadview and Hot Springs. The possibility of circling north of the Little Belt Mountains was the first alternative eliminated west of Broadview because of the excessive distance and the possible impact on the Gates of the Mountains area north of Helena. The possibility of paralleling the existing line north from Billings to the Musselshell River, following the river between the Castle Mountains and the Little Belt Mountains into the White Sulphur Springs area and crossing over the Big Belt Mountains near Benton Creek was also eliminated. While this alternative would have been about the same length as the alternative going south of the Castle Mountains, there was no apparent justification for paralleling U.S. Highway 12 and the developments along the river or for the difficult crossing of the Big Belt Mountains through a relatively

1 pristine area. Also, the White Sulphur Springs area is more
2 scenic and has a greater population than the area farther south
3 around Ringling.

4 The possibility of leaving the existing corridor just
5 east of Flathead Pass in the Bridger Range and going northwest
6 along the south fork of Sixteen Mile Creek into the Maudlow area
7 and continuing along the Sixteen Mile Creek Canyon to Toston was
8 also eliminated because of two areas of very rugged terrain with
9 no available access while shorter alternatives existed further
10 north for getting across the Big Belt-Bridger chain by crossing
11 only one ridge with some available access. The possibility of
12 coming from the Canyon Ferry area across the Helena Valley to
13 connect with Mullen Pass was eliminated because it did not offer
14 a reduction in total line length and because of the extensive
15 residential developments that would have been crossed, particu-
16 larly at the base of the Scratch Gravel Hills.

17 The possibility of going northwest from Jefferson City
18 by Chessman Reservoir, and on over the Continental Divide was
19 also eliminated. Although some access was available via mining-
20 camp trails, this route involved extensive rugged terrain, in-
21 cluding two passes over 6,500 feet in elevation, and offered
22 only a 2-to-3-mile reduction in total length. The extensive
23 ecological impact on dense high-altitude forest communities did
24 not seem justified when three other routes over the Continental
25 Divide were available which would cross only one major ridge of
26 less rugged terrain at a lower altitude.

27 Because most of the options west of the Continental
28 Divide involved paralleling existing corridors, they were

1 retained for detailed analysis. Among the possibilities elim-
2 inated during the preliminary analysis was that of going west
3 from Missoula up Nine Mile Creek and on into Paradise, Plains
4 and back to Hot Springs. This alternative would have increased
5 the length of the line as well as crossing a roadless area south-
6 east of Paradise and possibly impacting the narrow scenic valley
7 between Paradise and Plains, which has considerable tourist
8 traffic.

9 The possibility of leaving the existing Jocko Pass line
10 just as it enters the Flathead Valley and passing south of
11 Ravalli to connect with the existing line that crosses the Flat-
12 head River between Agency and Dixon was also eliminated because
13 of greater length and high visibility.

14 Those alternative segments retained for detailed analysis
15 were identified with a letter designation (Exhibit 1), were then
16 analyzed by additional aerial and ground reconnaissance and maps
17 portraying them were transmitted to consultants who had parti-
18 cipated in the analysis of the study area for their comments upon
19 the alternatives as they related to their discipline. These
20 segments identified a total of 54 alternative routes. A quan-
21 titative assessment of each corridor was undertaken. Final
22 determination of environment acceptability of each corridor and
23 the identification of the recommended route were based upon four
24 factors. These four factors were: the response from govern-
25 mental agencies and councils; the subjective impressions of the
26 Westinghouse and C. T. Main staff's; the response of local con-
27 sultants; and the quantitative information generated on each
28 alternative.

1 After inputs had been received, the approach taken was to
2 compare segments between common points then select the most
3 environmentally compatible segment and determine whether the
4 alternative segment was also environmentally acceptable. Where
5 a utility right-of-way exists within the corridor segment the
6 analysis assumed that the new right-of-way would be adjacent to
7 the existing right-of-way. For some segments only portions of
8 the three-mile wide corridor were recommended or found to be
9 environmentally acceptable. After the analysis each corridor
10 segment was placed in one of five categories: (1) recommended,
11 (2) environmentally acceptable but not recommended simply because
12 of increased length or not connecting other recommended segments,
13 (3) environmentally acceptable but somewhat inferior to recom-
14 mended alternatives, (4) environmentally acceptable but signifi-
15 cantly inferior to the recommended route, and (5) least desir-
16 able.

17 The approach taken to determine the recommended route was
18 to compare segments between common points to select the most
19 environmentally compatible segment and to determine whether the
20 alternative segment was also environmentally acceptable. Five
21 such comparisons were required to determine a recommended route
22 between Broadview and Hot Springs. The information base for this
23 comparison is contained in Table 1 which includes each segment
24 from Applicants' Exhibit 92.

25 The first comparison was between segment O and segments
26 P-Q. Information on this comparison is given in Table 2. For
27 the most part, these two segments cross similar terrain with
28 segment P-Q going over McDonald Pass and segment O going over

Mullen Pass. Segment O is 2.4 miles longer, crosses about the same amount of Douglas Fir Forest and has between 2 and 3 more miles of access roads. The principle problem with segment P-Q is that it parallels U.S. Highway 12 for several miles on the eastern slope of McDonald Pass where it would be visible and crosses Highway 12 near the top of McDonald Pass in a rather scenic area. On the other hand, Mullen Pass is remote from traveled routes, slightly lower in elevation, generally more gentle terrain and has some available access. For these reasons segment O was recommended for crossing the Continental Divide in this area over segment P-Q. This did not eliminate segment P from further consideration as the recommended crossing because it connected with other segments further west. This comparison did eliminate segment Q from further consideration in the recommended route and all route combinations utilizing segment Q could be eliminated. Segment Q was placed in Category 2, that is, environmentally acceptable but not recommended because of not connecting with other recommended segments.

The next comparison was between segments O-S-V and P-R-T (Table 3), originating just west of Helena and terminating along the Jocko River. Segment O-S-V goes over Mullen Pass through the Avon and Nevada Valleys and on over Jocko Pass while P-R-T goes over McDonald Pass, along the Clark Fork to Bearmouth on over the Garnet Range into Camas Prairie and then northwest into the Jocko River area. Segment P-R-T is almost 10 miles longer, crosses 20 more miles of forested land, uses less existing corridor, crosses more primary roads with high vehicle travel and has considerable parallel exposure to Interstate 90. Segment

P-R-T also traverses a roadless area north of Camas Prairie which would require a separate environmental impact statement from the Forest Service. The only apparent disadvantage to O-S-V was that it crossed the Blackfoot Clearwater Game Management Area. However, this crossing paralleled an existing 230-KV transmission line and did not offset the other disadvantages of P-R-T. Segments O-S-V were therefore recommended over P-R-T. Segment T was placed in Category 4, environmentally acceptable but significantly inferior to the recommended route.

The third comparison (Table 4) is between segments O-S-V-W and P-R-U, originating west of Helena and terminating about 14 miles southeast of Hot Springs. Segments O-S-V-W extend from the Jocko River area of O-S-V just discussed on into the Flathead Valley where it passes between St. Ignatius and the Bison Range, skirts the northeast corner of the Bison Range and continues northwest toward Hot Springs. Segments V-W parallel an existing 230-KV transmission line. Segment P-R-U crosses over McDonald Pass and connects with an existing 230 KV line south of Garrison. From this point it runs along the Clark Fork to the Missoula area, turns north over the Pass into the Flathead Indian Reservation and passes west of the Bison Range. From Garrison on, this alternative parallels existing 230-KV transmission lines. Segments P-R-U are over 10 miles longer, and crosses about 10 more miles of forest lands but would require less new right-of-way and should require less access roads than O-S-V-W. The principle disadvantage of P-R-U is that it would be exposed to over 20,000 vehicles per day at highway crossings and would parallel well-traveled primary

highways for over 40 miles including Interstate 90 along the scenic Clark Fork River. Segments O-S-V-W are therefore recommended over segments P-R-U with segment U being considered least desirable (Category 5). Segment P is placed in Category 3, environmentally acceptable but somewhat inferior to the recommended alternatives while segment R is placed in Category 2, environmentally acceptable but not recommended because of not connecting with other recommended segments.

The fourth comparison is between segment L and segments M-N originating east of the Big Belt Mountains and terminating southwest of Helena. Information on this comparison is contained in Table 5. Segment M-N is about 15 miles longer, crosses over 20 miles more of forest land and would require about 25 more miles of access roads. Segments M-N would also cross some crop dryland west of the Missouri River. The principle disadvantage of segment L in comparison to segments M-N is its proximity to human activity. Segment L would parallel Highway 287 for about 15 miles between Townsend and Helena. However, it would generally be at a distance of three to four miles against the backdrop of the Elkhorn Mountains and would be on the grasslands below the timber so that no clearing would be required. Another problem area for segment L is the crossing of Interstate 15 and passing between Helena and Unionville. This is rolling terrain which would enable concealment of the line to a large extent on public lands. However, the 3-mile wide corridor would need to be considerably reduced in width and pass just south of Montana City and between Unionville and Helena in order to avoid exposure to quality private lands

1 with potential for development. With these reservations
2 segment L is recommended over segments M-N because of its
3 shorter length and less involvement with high altitude forest
4 communities requiring considerable clearing. Segments M and
5 N are both placed in Category 3, environmentally acceptable
6 but somewhat inferior to the recommended alternative.

7 The final comparison is between segment H and segments
8 I-L-O-S, originating just south of Lennup and terminating
9 south of Ovando in the Nevada Valley. Information on this
10 comparison is contained in Table 6. Segments I-L-O-S are
11 almost 10 miles longer but involve less high altitude forest
12 communities. The principle disadvantages of I-L-O-S are its
13 longer length, no use of existing corridor and the disadvantages
14 just discussed for segment L of paralleling Highway 287 and
15 passing between Helena and Unionville. The principle dis-
16 advantages of segment H are that it involves 12 or 13 more
17 miles of forest communities including several miles over 6,000
18 feet in elevation. A portion of this is over Stemple Pass
19 between Helena and Lincoln which is considerably higher, more
20 rugged and remote than Mullen Pass crossed by segment O. The
21 major disadvantage of segment H, however, is passing around
22 the north end of Canyon Ferry Lake. There is extensive
23 recreational development in this area which cannot be avoided.
24 It is primarily for this factor that segments I-L-O-S are
25 recommended over segment H, with segment H being considered in
26 Category 5, least desirable.

27 The recommended route resulting from this study is shown
28 on Applicants' Exhibit 92. It consists of segment

1 F-I-L-O-S-V-W-X and is subject to the following restrictions.
2 Along segment L, west of Canyon Ferry Reservoir, the corridor
3 width should be restricted to a quarter of a mile along the
4 base of the trces. Also, from Montana City across Interstate
5 15 then passing between Helena and Unionville and on across U.S.
6 12, the corridor width should be restricted to a quarter of a
7 mile strategically cutting through the low hills in this area.
8 This will enable maximum reduction of visibility from highways
9 and residential or potential residential areas. From the
10 intersection of segments S and V below Ovando on to Hot Springs,
11 the new transmission lines should be kept as close to the exist-
12 ing 230-KV transmission line as possible. Right-of-ways should
13 be able to be adjacent through most of this area. When crossing
14 U.S. 93 between Ravalli and St. Ignatius the new right-of-way
15 should be kept to the west side of, and adjacent to, the exist-
16 ing 230-KV line in order to reduce the visual exposure in the
17 Flathead Valley and St. Ignatius area. Also the right-of-way
18 should not touch upon the northwest corner of the Bison Range.

19 Those segments judged environmentally acceptable which
20 were not recommended simply because of increased length or
21 connections to other segments having problems include G, J,
22 portion of K east of Bridger Mountains, Q, R and portion of U
23 north and west of Arlee. Those segments judged environmentally
24 acceptable but which were not recommended because alternatives
25 existed which involved easier mountain crossings or paralleling
26 existing right-of-ways include M and N. Segments P and T were
27 judged environmentally acceptable but significantly inferior to
28 other alternatives available. Segment P involved major visual

1 exposure over McDonald Pass while segment T involved a roadless
2 area north of Missoula which would require a separate environ-
3 mental impact analysis by the Forest Service before routing could
4 be approved. Those segments judged least desirable were segments
5 H, portion of K west of Bridger Mountains and portion of U between
6 Elliston and Arlee.

7 A transmission system may have beneficial and adverse
8 effects on the physical, biological and cultural environments
9 during its construction and operation.

10 Potential adverse effects may be eliminated or minimized
11 by engineering design, route location and construction practices.
12 The recommended route and environmentally acceptable alternate
13 routes were selected on the basis of eliminating or minimizing
14 adverse impacts. Adverse effects caused by construction can be
15 mitigated by strict adherence to certain construction practices
16 and avoidance of others. The construction guidelines constitute
17 restrictions that will be imposed upon the contractor and they
18 will be included in the bid package sent to prospective bidders.
19 The actual machinery or construction methods used will be left
20 up to the contractor so long as he complies with the guidelines.

21 The impacts upon the physical environment associated with
22 these transmission lines are not expected to be severe. Of the
23 426 miles of transmission line right-of-way approximately 70 miles
24 are across mountainous areas with which the impacts on the physi-
25 cal environment are primarily associated. Less than 100 miles are
26 considered to have a moderate to severe erosion hazard while about
27 35 miles are considered to have a severe erosion hazard. In all
28 cases, however, erosion problems are expected to be very localized

1 due to the restrictive guidelines under which the contractor must
2 operate. Fifty-two continuously flowing streams and 93 inter-
3 mittent streams will be crossed.

4 Impact on the biological environment is also not expected
5 to be severe. Most of the transmission system will be within the
6 grassland and sagebrush communities considered least sensitive.
7 Of these communities only about 2 acres are expected to be per-
8 manently removed from biological productivity. An additional
9 2,500 acres will be temporarily disturbed during construction for
10 the location of towers and 800 acres will be temporarily dis-
11 turbed for access roads in these grassland and sagebrush com-
12 munities. All this acreage can be expected to return to pre-
13 construction condition within 2 to 5 years. Approximately 90
14 miles of right-of-way will cross those communities considered
15 sensitive, that is the forest communities. Twenty miles of this
16 is in the Eastern Ponderosa Forest and Savannah between Colstrip
17 and Broadview which was the subject of another hearing. Of the
18 70 miles in Western Ponderosa and Douglas Fir Forest, 40 miles
19 will be paralleling existing transmission lines. Within these
20 forest communities less than 1 acre will be permanently removed
21 from biological productivity for transmission line structures.
22 An additional 700 acres will be temporarily disturbed for tower
23 construction while approximately 300 acres will be disturbed for
24 access roads and the condition will be permanent or temporary
25 depending on whether the roads are opened or closed. About 2,500
26 acres will require selective management to avoid interference of
27 tall trees with the conductors. However, much of this acreage
28 does not produce merchantable timber. This involves about 70

1 miles of line with 300 foot right of way.

2 Because the principal impact upon wildlife from trans-
3 mission line construction comes primarily from increased human
4 access to previously remote areas or critical habitat destruction,
5 these lines are not expected to significantly affect wildlife.
6 Those species of wildlife most intolerant of human intrusion are
7 primarily associated with the high altitude forest communities in
8 the study area. The chance of impacting these wildlife is largely
9 eliminated by constructing along existing corridors or in areas
10 where some dirt access already exists. No significant portion
11 of the habitat critical to any of the wildlife species in the
12 study area is going to be eliminated. Some concern has been
13 expressed for transmission lines restricting the movement of wild-
14 life because of their reluctance to cross the cleared right-of-
15 way. However, this will be minimized by the extensive parallel-
16 ing of existing lines.

17 The principle impact on the cultural environment will be
18 largely visual. Twelve primary roads carrying a total of over
19 15,000 vehicles per day will be crossed by this transmission
20 system. In addition, 10 secondary roads carrying a total of
21 approximately 2,000 vehicles per day will be crossed. Parallel
22 exposure to highways will be for about 15 miles along Highway 287
23 southeast of Helena which carries approximately 2,500 vehicles
24 per day in that area. This exposure will be at a distance of 3
25 to 4 miles with a mountain backdrop. About 17 miles of crop dry-
26 land will be crossed. However, cultivation is scattered through
27 this area and the estimated five acres of land that would be
28 removed from crop production is probably high. The recommended

1 route does cross National Forest, State Forest, State Game
2 Management areas and Indian lands. These crossings will require
3 additional coordination with the administrative agencies before
4 approval can be expected.

5 In summary, this analysis has produced an environmentally
6 acceptable route, estimated the impact of construction along the
7 route, and identified possible alternatives that should also be
8 acceptable.

TABLE 1 DESCRIPTIVE COMPARISON OF SITES

| <u>Segment Description</u> | <u>A</u> | <u>B</u> | <u>C</u> | <u>D</u> | <u>E</u> | <u>F</u> | <u>G</u> | <u>H</u> | <u>I</u> | <u>J</u> | <u>K</u> | <u>L</u> |
|--|---------------------|---------------------|---------------------|----------|----------|-----------------|-----------------|----------|----------|----------|-----------------|----------|
| 1.0 Segment Length (miles) | 30.0 | 62.8 | 99.2 | 20.8 | 10.4 | 106.8 | 96.8 | 138.8 | 24.8 | 33.2 | 77.6 | 65.5 |
| 2.0 Natural Biotic Communities | | | | | | | | | | | | |
| 2.1 Least Sensitive | | | | | | | | | | | | |
| 2.1.1 Foothill Sagebrush | | | | | | | | | | | | |
| 2.1.2 Interrontane and Foothill Grassland | | | | | | | | | | | | |
| 2.1.3 Central Grassland | 65.6 | 42.0 | 80.0 | 20.8 | 10.4 | 82.0 | 54.4 | 17.6 | 44.2 | 3.4 | 26.0 | 72.5 |
| 2.2 Sensitive | | | | | | | | | | | | |
| 2.2.1 Douglas Fir Forest | | | | | | | | | | | | |
| 2.2.2 Western Ponderosa Forest | | 4.8 | 14.4 | | | | | | | | | |
| 2.2.3 Eastern Ponderosa Forest | | | | | | | | | | | | |
| 2.2.4 Eastern Ponderosa Savanna | 14.4 | 16.0 | 4.8 | | | | | | | | | |
| 3.0 Erosion Hazard | | | | | | | | | | | | |
| 3.1 Slight | 7.2 | 2.4 | 8.0 | | | | | | | | | |
| 3.2 Slight to Moderate | 2.4 | 1.6 | 15.2 | | | | | | | | | |
| 3.3 Moderate | 68.8 | 58.8 | 67.2 | 20.8 | 10.4 | 75.6 | 54.4 | 78.0 | 56.2 | 5.6 | 6.6 | 1.9 |
| 3.4 Moderate to Severe | 1.6 | 8.8 | 8.8 | | | 16.8 | 39.2 | 7.2 | 2.4 | 33.0 | 24.3 | 14.4 |
| 3.5 Severe | | | | | | 0.7 | | 1.6 | 4.8 | 14.4 | 6.3 | |
| 4.0 Access Roads | | | | | | | | | | | | |
| 4.1 Miles/Corridor Miles | 0.4/1.0 /1.1/1.6 | 1.1/1.6 /1.1/1.6 | 0.4/1.0 /1.1/1.6 | 1.1 | 1.1 | 1.1/1.6 /1.1 | 0.4/1.0 /1.1 | 1.1/1.6 | 1.1 | 1.1 | 1.1/1.0 /0.4 | 1.1/1.6 |
| 4.2 Total Length of Access Roads | 65.4 | 79.5 | 62.1 | 22.9 | 11.4 | 118.3 | 55.5 | 156.8 | 27.3 | 36.5 | 55.9 | 76.5 |
| 5.0 Area Removed from Bio- logical Productivity | | | | | | | | | | | | |
| 5.1 Least Sensitive Com- munities | | | | | | | | | | | | |
| Towers-Permanent* | 0.44 | 0.28 | 0.54 | 0.14 | 0.07 | 0.71 | 0.61 | 0.64 | 0.17 | 0.22 | 0.49 | 0.38 |
| acres | | | | | | | | | | | | |
| Towers-Temporary** | 489 | 313 | 597 | 155 | 78 | 785 | 680 | 713 | 185 | 243 | 541 | 423 |
| acres | | | | | | | | | | | | |
| 5.2 Sensitive Communities | | | | | | | | | | | | |
| Towers-Permanent* | 118 | 112 | 99 | 56 | 28 | 281 | 121 | 227 | 66 | 83 | 123 | 151 |
| acres | | | | | | | | | | | | |
| Towers-Temporary** | 101 | 155 | 146 | 12 | 42 | 322 | | | | | | |
| acres | | | | | | | | | | | | |
| Access Roads acres*** | 42 | 80 | 57 | 6 | 14 | 154 | | | | | | |

TABLE 1 (Continued)

| <u>Segment Description</u> | <u>M</u> | <u>N</u> | <u>O</u> | <u>P</u> | <u>Q</u> | <u>R</u> | <u>S</u> | <u>T</u> | <u>U</u> | <u>V</u> | <u>W</u> | <u>X</u> |
|---|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 1.0 Segment Length (miles) | 51.2 | 28.8 | 23.6 | 13.6 | 7.6 | 5.6 | 34.0 | 83.2 | 122.4 | 40.0 | 33.2 | 14.4 |
| 2.0 Natural Biotic Communities | | | | | | | | | | | | |
| 2.1 Least Sensitive | | | | | | | | | | | | |
| 2.1.1 Foothill Sagebrush | | | | | | | | | | | | |
| 2.1.2 Intermontane and Foothill Grassland | 4.8 | 4.6 | 9.8 | 7.6 | 5.6 | 25.1 | 37.6 | 72.0 | 14.4 | 20.0 | 14.4 | -3824- |
| 2.1.3 Central Grassland | 39.8 | 24.2 | 13.8 | 13.6 | 8.8 | 16.8 | 8.0 | 24.0 | 1.6 | 13.2 | | |
| 2.2 Sensitive | | | | | | | | | | | | |
| 2.2.1 Douglas Fir Forest | 6.6 | 24.2 | 13.8 | 13.6 | 8.8 | 28.8 | 42.4 | 1.6 | | | | |
| 2.2.2 Western Ponderosa Forest | - | | | | | | | | | | | |
| 2.2.3 Eastern Ponderosa Forest | | | | | | | | | | | | |
| 2.2.4 Eastern Ponderosa Savannan | | | | | | | | | | | | |
| 3.0 Erosion Hazard | | | | | | | | | | | | |
| 3.1 Slight | 8.8 | 0 | 5.7 | 0 | 0 | 25.1 | 12.8 | 14.4 | 11.9 | 12.0 | | |
| 3.2 Slight to Moderate | 0.8 | 9.6 | 6.4 | 7.6 | 4.8 | 25.1 | 70.4 | 1.6 | | | | |
| 3.3 Moderate | 27.8 | 8.8 | 0.8 | 0.8 | 0.8 | 70.4 | 85.1 | 24.0 | 21.3 | 2.4 | | |
| 3.4 Moderate to Severe | 8.8 | 10.4 | 17.9 | 0.8 | 8.9 | 6.4 | | | | | | |
| 3.5 Severe | | | | | | | | | | | | |
| 4.0 Access Roads | | | | | | | | | | | | |
| 4.1 Miles/Corridor Miles | 1.1/1.6 | 1.1/1.6 | 1.1/1.6 | 1.6 | 1.1 | 1.1 | 1.1/1.6 | 0.4/1.0 | 0.4/1.0 | 0.4/1.0 | 0.4 | |
| 4.2 Total Length of Access Roads | 59.7 | 43.8 | 32.9 | 21.8 | 8.3 | 6.2 | 41.7 | 1.1/1.6 | 1.1/1.6 | 1.1/1.6 | 5.8 | |
| | | | | | | | 90.4 | 90.1 | 90.1 | 31.4 | 21.2 | |
| 5.0 Area Removed from Biological Productivity | | | | | | | | | | | | |
| 5.1 Least Sensitive Communities | | | | | | | | | | | | |
| Towers-Permanent [*] | 0.30 | 0.03 | 0.07 | 0.05 | 0.04 | 0.17 | 0.25 | 0.48 | 0.10 | 0.13 | 0.10 | |
| acres | | | | | | | | | | | | |
| Towers-Temporary ^{**} | 333 | 34 | 73 | 57 | 42 | 187 | 281 | 537 | 107 | 149 | 107 | |
| acres | | | | | | | | | | | | |
| Access Roads acres *** | 116 | 12 | 26 | 20 | 15 | 67 | 54 | 92 | 14 | 19 | 14 | |
| 5.2 Sensitive Communities | | | | | | | | | | | | |
| Towers-Permanent * | 0.15 | 0.16 | 0.09 | 0.09 | 0.06 | 0.31 | 0.34 | 0.17 | 0.09 | | | |
| acres | | | | | | | | | | | | |
| Towers-Temporary ** | 49 | 180 | 103 | 101 | 66 | 340 | 376 | 191 | 59 | | | |
| acres | | | | | | | | | | | | |
| Access Roads acres *** | 26 | 94 | 54 | 53 | 34 | 165 | 126 | 62 | 32 | | | |

Segment Description

| | A | B | C | D | E | F | G | H | I | J | K | L |
|---------------------------------|------|------|-------|------|------|-------|------|-------|------|------|------|------|
| 6.0 Agronomy | | | | | | | | | | | | |
| Crop Dryland | | | | | | | | | | | | |
| Miles | 19.2 | 0.8 | 20.0 | 0 | 0.8 | 16.0 | 30.4 | 0 | 0 | 0 | 10.4 | |
| Acres*** | 5.7 | 0.2 | 6.0 | | 0.2 | 4.8 | 9.1 | | | | 3.1 | |
| 7.0 Use of Existing R-0-W | | | | | | | | | | | | |
| 7.1 New Corridor | 36.8 | 62.8 | 15.0 | 20.8 | 10.4 | 106.8 | 19.2 | 120.4 | 24.8 | 33.2 | 29.6 | |
| 7.2 Corridor Along Existing | 43.2 | 0 | 83.2 | 0 | 0 | 0 | 77.6 | 18.4 | 0 | 0 | 48.0 | |
| R-0-W | | | | | | | | | | | | |
| 8.0 Relative Scenic Values | | | | | | | | | | | | |
| 8.1 Scenic Mountain and | | | | | | | | | | | | |
| Hills (miles) | 0 | 4 | 6 | 0 | 0 | 0 | 0 | 0 | 2 | 4 | | |
| 8.2 Other Scenic Areas | 48 | 22 | 24 | 0 | 0 | 0 | 23 | 50 | 0 | 12 | 10 | 24 |
| (miles) | | | | | | | | | | | | |
| 9.0 Highways | | | | | | | | | | | | |
| 9.1 Primary Roads | | | | | | | | | | | | |
| 9.1.1 Crossings | | | | | | | | | | | | |
| 9.1.1.1 Number of Crossings | 1 | 2 | 6 | 0 | 1 | 3 | 2 | 5 | 1 | 2 | | |
| 9.1.1.2 Vehicles per Day | 1870 | 2300 | 13100 | 0 | 1000 | 2260 | 2500 | 5420 | 230 | 340 | 2520 | 4200 |
| 9.1.2 Parallel Exposure | | | | | | | | | | | | |
| 9.1.2.1 Length, miles | 0 | 0 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 15 | |
| 9.1.2.2 Vehicles per Day | 0 | 0 | 2200 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2500 | |
| 9.2 Secondary Roads | | | | | | | | | | | | |
| 9.2.1 Number of Crossings | 2 | 1 | 1 | 0 | 0 | 2 | 4 | 6 | 0 | 1 | 4 | |
| 9.2.2 Vehicles per Day | 205 | 35 | 60 | 0 | 0 | 75 | 490 | 2100 | 200 | 685 | 725 | |
| 10.0 Stream Crossings*** | | | | | | | | | | | | |
| 10.1 Continuous | 4 | 3 | 4 | 0 | 0 | 8 | 16 | 21 | 2 | 9 | 14 | |
| 10.2 Intermittent | 36 | 20 | 26 | 8 | 6 | 43 | 18 | 22 | 1 | 2 | 14 | 2 |
| 11.0 Elevation - Forested Lands | | | | | | | | | | | | |
| Over 6000 ft (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 10 | 0 | 0 | 5 | 2 | |
| 5000 to 6000 ft (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 16 | 0 | 0 | 0 | 7 | |

Segment Description

| | M | N | O | P | Q | R | S | T | U | V | W | X |
|--|------------|------|------|------|-----|------|-------|-------|------|------|------|--------|
| 6.0 Agronomy Crop Dryland Miles Acres *** | 9.6 2.9 | | | | | | | | | | | |
| 7.0 Use of Existing R-O-W | | | | | | | | | | | | |
| 7.1 New Corridor | 51.2 | 28.8 | 23.6 | 13.6 | 7.6 | 5.6 | 34.0 | 48.0 | 16.0 | 0 | 0 | 0 |
| 7.2 Corridor Along Existing | 0 | 0 | 0 | 0 | 0 | 0 | 35.2 | 106.4 | 40.0 | 33.2 | 14.4 | -3826- |
| 8.0 Relative Scenic Values | | | | | | | | | | | | |
| 8.1 Scenic Mountain and Hills (miles) | 4.0 | 9.0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 9.0 | 3.0 | |
| 8.2 Other Scenic Areas (miles) | 0 | 0 | 0 | 0 | 0 | 0 | 10.0 | 6.0 | 25.0 | 14.2 | 12.0 | 0 |
| 9.0 Highways | | | | | | | | | | | | |
| 9.1 Primary Roads | | | | | | | | | | | | |
| 9.1.1 Crossings | | | | | | | | | | | | |
| 9.1.1.1 Number of Crossings | 1 | 1 | 1 | 1 | 0 | 2 | 7 | 1 | 1 | 1 | 1 | |
| 9.1.1.2 Vehicles per Day | 1300 | 1600 | 1500 | 1400 | 0 | 1100 | 17050 | 1200 | 2700 | 740 | | |
| 9.1.2 Parallel Exposure | | | | | | | | | | | | |
| 9.1.2.1 Length, miles | 0 | 0 | 0 | 0 | 0 | 0 | 15 | 37 | 0 | 0 | 0 | |
| 9.1.2.2 Vehicles per Day | | | | | | | 1400 | 3300 | 3100 | | | |
| 9.2 Secondary Roads | | | | | | | | | | | | |
| 9.2.1 Number of Crossings | 1 | 0 | 1 | 0 | 0 | 0 | 2 | 1 | 3 | 1 | 0 | |
| 9.2.2 Vehicles per Day | 100 | ~ | 100 | ~ | ~ | ~ | 370 | 90 | 3325 | 625 | ~ | |
| 10.0 Stream Crossings *** | | | | | | | | | | | | |
| 10.1 Continuous | 5 | 9 | 3 | 0 | 1 | 2 | 18 | 22 | 13 | 4 | 3 | |
| 10.2 Intermittent | 7 | 5 | 4 | 3 | 6 | 4 | 7 | 10 | 24 | 2 | 2 | |
| 11.0 Elevations - Forested Lands | | | | | | | | | | | | |
| Over 6000 ft (miles) | 0 | 3 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | |
| 5000 to 6000 ft (miles) | 7 | 11 | 9 | 10 | 0 | 0 | 17 | 0 | 14 | 3 | 0 | |

* Assuming 36 square feet per tower and 4.06 towers per mile.

** Assuming a 200-foot wide area per tower and 4.06 towers per mile.

*** Assuming a 40-foot square per tower will be affected.

**** Assuming a 40-foot square per tower will be removed from crop production and 4.06 towers per mile.

***** Based on U.S. Geological Survey 1:250,000 Topographic maps.

TABLE 2

DESCRIPTIVE COMPARISON OF SEGMENTS P-Q AND O

| <u>Segment Criteria</u> | <u>O</u> | <u>P-Q</u> |
|--------------------------------|----------|------------|
| Segment length, miles | 23.6 | 21.2 |
| Natural Vegetative Communities | | |
| Least Sensitive | | |
| Foothills grassland, miles | 9.8 | 7.6 |
| Sensitive | | |
| Douglas Fir Forest, miles | 13.8 | 13.6 |
| Erosion Hazard | | |
| Slight, miles | 5.6 | |
| Slight to Moderate, miles | | 7.6 |
| Moderate, miles | | 6.4 |
| Moderate to Severe, miles | | 0.8 |
| Severe, miles | 17.2 | 6.4 |
| Access Roads, miles | 32.9 | 30.1 |
| Area Removed from Productivity | | |
| Least Sensitive Communities | | |
| Towers-Permanent, acres | 0.07 | 0.05 |
| Towers-Temporary, acres | 73 | 57 |
| Access Roads, acres | 26 | 20 |
| Sensitive Communities | | |
| Towers-Permanent, acres | 0.09 | 0.09 |
| Towers-Temporary, acres | 103 | 101 |
| Access Roads, acres | 54 | 53 |
| Use of Existing Corridor | | |
| New Corridor | 23.6 | 21.2 |
| Corridor Along Existing R-O-W | 0 | 0 |
| Highways | | |
| Primary Roads | | |
| Crossings | | |
| Number of Crossings | 1 | 1 |
| Total Vehicles per Day | 1500 | 1400 |
| Parallel Exposure | | |
| Length, miles | 0 | 8 |
| Vehicles per Day | | 1400 |
| Secondary Roads | | |
| Crossings | | |
| Number of Crossings | 1 | 0 |
| Vehicles per Day | 100 | |
| Stream Crossings | | |
| Continuous | 3 | 0 |
| Intermittent | 4 | 9 |
| Elevation Forested Lands | | |
| Over 6000 feet, miles | 1 | 3 |
| 5000 to 6000 feet, miles | 9 | 10 |

TABLE 3

DESCRIPTIVE COMPARISON OF SEGMENTS O-S-V AND P-R-T

| <u>Segment Criteria</u> | <u>O-S-V</u> | <u>P-R-T</u> |
|---|--------------|--------------|
| Segment Length, miles | 92.6 | 102.4 |
| Natural Biotic Communities | | |
| Least Sensitive | | |
| Intermontane and Foothill Grassland | 49.3 | 43.2 |
| Sensitive | | |
| Douglas Fir Forest | 37.8 | 30.4 |
| Western Ponderosa Forest | 1.6 | 28.8 |
| Erosion Hazard | | |
| Slight, miles | 5.7 | |
| Slight to Moderate, miles | 39.5 | 4.8 |
| Moderate, miles | 1.6 | 19.2 |
| Moderate to Severe, miles | 24.0 | 71.2 |
| Severe, miles | 26.8 | 7.2 |
| Access Roads, miles | 106 | 118.4 |
| Area Removed from Biological Productivity | | |
| Least Sensitive Communities | | |
| Towers-Permanent, acres | 0.34 | 0.29 |
| Towers-Temporary, acres | 367 | 323 |
| Access Roads, acres | 107 | 69 |
| Sensitive Communities | | |
| Towers-Permanent, acres | 0.32 | 0.4 |
| Towers-Temporary, acres | 360 | 441 |
| Access Roads, acres | 150 | 218 |
| Use of Existing R-O-W | | |
| New Corridor | 57.6 | 67.2 |
| Corridor Along Existing R-O-W | 40.0 | 35.2 |
| Relative Scenic Values | | |
| Scenic Mountain and Hills, miles | 0 | 20 |
| Other Scenic Areas, miles | 24.2 | 6 |
| Highways | | |
| Primary Roads | | |
| Crossings | | |
| Number of Crossings | 2 | 4 |
| Vehicles per Day | 2700 | 5260 |
| Parallel Exposure | | |
| Length, miles | 0 | 8/15 |
| Vehicles per Day | | 1400/3300 |
| Secondary Roads | | |
| Number of Crossings | 4 | 1 |
| Vehicles per Day | 1145 | 90 |
| Stream Crossings | | |
| Continuous | 18 | 19 |
| Intermittent | 13 | 17 |
| Elevation - Forested Lands | | |
| Over 6000 feet, miles | 1 | 4 |
| 5000 to 6000 feet, miles | 23 | 27 |

TABLE 4

DESCRIPTIVE COMPARISON OF SEGMENTS O-S-V-W AND P-R-U

| <u>Segment Criteria</u> | <u>O-S-V-W</u> | <u>P-R-U</u> |
|---|----------------|--------------|
| Segment Length, miles | 130.8 | 141.6 |
| Natural Biotic Communities | | |
| Least Sensitive | | |
| Intermontane and Foothill Grassland | 69.3 | 77.6 |
| Sensitive | | |
| Douglas Fir Forest | 51.0 | 21.6 |
| Western Ponderosa Forest | 1.6 | 42.4 |
| Erosion Hazard | | |
| Slight, miles | 5.7 | 10.0 |
| Slight to Moderate, miles | 51.4 | 32.1 |
| Moderate, miles | 1.6 | 6.4 |
| Moderate to Severe, miles | 45.3 | 85.9 |
| Severe, miles | 26.8 | 7.2 |
| Access Roads, miles | 127.2 | 118.1 |
| Area Removed from Biological Productivity | | |
| Least Sensitive Communities | | |
| Towers-Permanent, acres | 0.47 | 0.46 |
| Towers-Temporary, acres | 516 | 579 |
| Access Roads, acres | 136 | 107 |
| Sensitive Communities | | |
| Towers-Permanent, acres | 0.41 | 0.43 |
| Towers-Temporary, acres | 459 | 477 |
| Access Roads, acres | 182 | 179 |
| Use of Existing R-O-W | | |
| New Corridor | 57.6 | 35.2 |
| Corridor Along Existing R-O-W | 73.2 | 106.4 |
| Relative Scenic Values | | |
| Scenic Mountain and Hills, miles | 9 | 0 |
| Other Scenic Areas, miles | 36.2 | 25 |
| Highways | | |
| Primary Roads | | |
| Crossings | | |
| Number of Crossings | 3 | 9 |
| Vehicles per Day | 5400 | 19550 |
| Parallel Exposure | | |
| Length, miles | 0 | 8/37 |
| Vehicles per Day | | 1400/3100 |
| Secondary Roads | | |
| Crossings | | |
| Number of Crossings | 4 | 3 |
| Vehicles per Day | 1145 | 3325 |
| Stream Crossings | | |
| Continuous | 22 | 23 |
| Intermittent | 17 | 31 |
| Elevation - Forested Lands | | |
| Over 6000 feet, miles | 1 | 3 |
| 5000 to 6000 feet, miles | 26 | 10 |

TABLE 5

DESCRIPTIVE COMPARISON OF SEGMENTS L AND M-N

| <u>Segment Criteria</u> | <u>L</u> | <u>M-N</u> |
|---|----------|------------|
| Segment Length, miles | 65.5 | 80.0 |
| Natural Biotic Communities | | |
| Least Sensitive | | |
| Foothill Sagebrush, miles | 31.1 | 4.8 |
| Intermontane and Foothill Grassland | 25.6 | 44.4 |
| Sensitive | | |
| Douglas Fir Forest | 8.8 | 30.8 |
| Erosion Hazard | | |
| Slight, miles | 1.6 | 0 |
| Slight to Moderate, miles | 32.0 | 8.8 |
| Moderate, miles | 1.6 | 10.4 |
| Moderate to Severe, miles | 24.0 | 36.6 |
| Severe, miles | 6.3 | 19.2 |
| Access Roads, miles | 76.5 | 101.5 |
| Area Removed from Biological Productivity | | |
| Least Sensitive Communities | | |
| Towers-Permanent, acres | 0.38 | 0.33 |
| Towers-Temporary, acres | 423 | 367 |
| Access Roads, acres | 151 | 128 |
| Sensitive Communities | | |
| Towers-Permanent, acres | 0.06 | 0.21 |
| Towers-Temporary, acres | 66 | 229 |
| Access Roads, acres | 34 | 120 |
| Agronomy, Crop Dryland | | |
| Miles | 0 | 9.6 |
| Acres | 0 | 2.9 |
| Use of Existing R-O-W | | |
| New Corridor | 65.0 | 80.0 |
| Corridor Along Existing R-O-W | 0 | 0 |
| Relative Scenic Values | | |
| Scenic Mountain and Hills, miles | 4 | 13 |
| Other Scenic Areas, miles | 24 | 0 |
| Highways | | |
| Primary Roads | | |
| Crossings | | |
| Number of Crossings | 2 | 2 |
| Vehicles per Day | 4200 | 2900 |
| Parallel Exposure | | |
| Length, miles | 15 | 0 |
| Vehicles per Day | 2500 | 0 |
| Secondary Roads | | |
| Crossings | | |
| Number of Crossings | 3 | 1 |
| Vehicles per Day | 725 | 100 |
| Stream Crossings | | |
| Continuous | 14 | 14 |
| Intermittent | 2 | 12 |
| Elevation - Forested Lands | | |
| Over 6000 feet, miles | 2 | 3 |
| 5000 to 6000 feet, miles | 7 | 18 |

TABLE 6

DESCRIPTIVE COMPARISON OF SEGMENTS H AND I-L-O-S

| <u>Segment Criteria</u> | <u>H</u> | <u>I-L-O-S</u> |
|---|----------|----------------|
| Segment Length, miles | 138.8 | 147.9 |
| Natural Biotic Communities | | |
| Least Sensitive | | |
| Foothill Sagebrush | 51.4 | 52.5 |
| Intermontane and Foothill Grassland | 44.2 | 63.9 |
| Sensitive | | |
| Douglas Fir Forest | 27.2 | 22.6 |
| Western Ponderosa Forest | 16.0 | 8.8 |
| Erosion Hazard | | |
| Slight, miles | 4.6 | 7.3 |
| Slight to Moderate, miles | 0 | 67.5 |
| Moderate, miles | 78.0 | 7.2 |
| Moderate to Severe, miles | 56.2 | 31.2 |
| Severe, miles | 0 | 34.7 |
| Access Roads, miles | 156.8 | 178.4 |
| Area Removed from Biological Productivity | | |
| Least Sensitive Communities | | |
| Towers-Permanent, acres | 0.64 | 0.79 |
| Towers-Temporary, acres | 713 | 868 |
| Access Roads, acres | 227 | 310 |
| Sensitive Communities | | |
| Towers-Permanent, acres | 0.29 | 0.21 |
| Towers-Temporary, acres | 322 | 235 |
| Access Roads, acres | 154 | 122 |
| Use of Existing R-O-W | | |
| New Corridor | 120.4 | 147.9 |
| Corridor Along Existing R-O-W | 18.4 | 0 |
| Relative Scenic Values | | |
| Scenic Mountain and Hills, miles | 13 | 4 |
| Other Scenic Areas, miles | 50 | 34 |
| Highways | | |
| Primary Roads | | |
| Crossings | | |
| Number of Crossings | 5 | 4 |
| Vehicles per Day | 5420 | 5930 |
| Parallel Exposure | | |
| Length, miles | 5/10 | 15 |
| Vehicles per Day | 370/1400 | 2800 |
| Secondary Roads | | |
| Crossings | | |
| Number of Crossings | 6 | 6 |
| Vehicles per Day | 2100 | 1195 |
| Stream Crossings | | |
| Continuous | 21 | 21 |
| Intermittent | 22 | 14 |
| Elevation - Forested Land | | |
| Over 6000 feet, miles | 10 | 3 |
| 5000 to 6000 feet, miles | 16 | 16 |

1 EXAMINATION OF BRENT T. WAHLQUIST

2 Cross, by Department of Natural Resources and Conservation

3 By Mr. Sheridan:

4 Q Dr. Wahlquist, what was your first job when you got out of
5 college?

6 A With Westinghouse Electric Corporation, the research labor-
7 atories.

8 Q Have you ever held any other employment as a PhD?

9 A Other than Westinghouse Electric?

10 Q Yes.

11 A No, I have not.

12 Q Prior to the time you joined Westinghouse, which was what
13 year?

14 A 1971.

15 Q How old are you now?

16 A I am now 33.

17 Q What experience have you had prior to the time you joined
18 Westinghouse on transmission line planning?

19 A None. Let me make one correction in terms of transmission
20 line. I was involved in survey for a natural gas pipeline
21 across southern Idaho in 1960.

22 Q 1960?

23 A Yes.

24 Q What was your job?

25 A I was a chainman on a survey crew.

26 Q So it didn't really have too much to do in terms of planning
27 of transmission lines --

28 A No.

1 Q -- from the aspect of estimating and environmental analysis?

2 A No, that is correct.

3 Q Have you ever published in any journals or scientific papers?

4 A Yes.

5 Q When?

6 A There is an abstract published in the proceedings of the 12th
7 annual Botanical Congress, which was held in Leningrad. That
8 paper dealt with reclamation in the arid southwest, strip mine
9 reclamation. I published a paper -- an abstract was published
10 in the bulletin of the Ecological Society of America in the
11 spring of 1975 -- I think it was the spring issue -- dealing
12 with the decomposition of organic complexes in soil, and a
13 full paper was published in the proceedings of the Third
14 Symposium on Surface Mining and Reclamations, sponsored by the
15 Bituminous Coal Research and National Coal Association held in
16 Louisville October, 1975. Also, a paper will be published as
17 part of the proceedings of a symposium held in Mississippi
18 State University campus in January of 1976 dealing with land
19 use and right-of-way planning for transmission lines.

20 Q Prior to March 27, 1975, you hadn't published in any scientific
21 journal, had you?

22 A That is correct.

23 Q Turning to page two of your written testimony, Dr. Wahlquist,
24 line five, you state that one of your objectives in the en-
25 vironmental analysis was to locate and analyze possible trans-
26 mission line routes between the Colstrip generating station
27 and the Hot Springs substation. Can you tell me, at the time
28 you first became involved with the Colstrip project, who was

1 primarily responsible for transmission line planning and en-
2 gineering?

3 A For the Colstrip project?

4 Q Yes.

5 A The group primarily responsible for planning and engineering
6 was C. T. Main.

7 Q C. T. Main has its offices in Portland, Oregon, does it not?

8 A That was the office I think was responsible for -- that this
9 was being administered through, to the best of my knowledge.

10 Q How far along in engineering were they when you first became
11 involved with this project?

12 A I am not sure how far along they were in engineering. They
13 had basically selected a system but they had not selected --
14 that would be 500kv as best I recall -- they had not at that
15 point selected towers, the types of towers, types of conductors,
16 other things of that aspect had not been selected at that
17 point, as best I remember.

18 Q What had they done by way of selecting transmission line routes
19 from Colstrip to Hot Springs?

20 A At the time we first became involved in the job they had done
21 nothing.

22 Q Nothing?

23 A No.

24 Q What time was this?

25 A This would have been in January or February of '73. To the
26 best of my knowledge that's true.

27 Q It is your understanding then that four months prior to the
28 filing of the application for Colstrip units 3 and 4 that C. T.

1 Main had done nothing with respect to determining a route for
2 a transmission line between the Colstrip generating station
3 and the Hot Springs substation?

4 A To the best of my knowledge that's true. That would depend--
5 what was the date of the application?

6 Q June of 1973.

7 A I believe involvement in the routing first got started in
8 February of that year.

9 Q Let's talk about what you did in determining a route for that
10 transmission line. First of all, what instructions were given
11 you by the Montana Power Company personnel with respect to
12 locating a transmission line route prior to the time you made
13 any reconnaissance?

14 A The principal constraint that was placed was the need for a
15 substation somewhere in the Billings area and the need for a
16 substation somewhere in the Helena area and the origin point
17 at Colstrip and the termination point at Hot Springs.

18 Q Did the Montana Power Company provide you with a choice of
19 several transmission line corridors to analyze?

20 A No, there was a map that was prepared by C. T. Main initially;
21 however, I think it was before they had done reconnaissance--
22 they will be able to answer that better than I -- which was
23 submitted to us. Then I think they performed some reconnaiss-
24 sance, provided an up-date of that initially, but the first
25 map they provided went from Colstrip to Billings and then they
26 provided another map which did have alternative routes running
27 from Billings on to Hot Springs, but as I recollect, those
28 came directly to us from C. T. Main; they did not come through

1 Montana Power.

2 Q So, C. T. Main would be the people to tell us essentially
3 what alternative route corridors were available to them as
4 advised by Montana Power Company initially, and not you?

5 A We had no restrictions placed upon us by Montana Power in
6 terms of what routes were available, no.

7 Q But C. T. Main had done some work, hadn't they?

8 A You say they had done some work?

9 Q Well, didn't they tell you what routes they were considering?

10 A Yes, they told us which routes they were considering. They
11 had done reconnaissance on the maps that were provided to us,
12 that is correct.

13 Q And it's true, sir, that the eventual route which you recom-
14 mended was one of the routes which C. T. Main had outlined
15 for you?

16 A Portions of it were and portions of it were not. It was not
17 the route which they initially recommended -- it was not which
18 they originally sought.

19 Q Well, there were several recommended routes and one of those
20 routes that C. T. Main informed you was a possibility was one
21 of the routes -- was the route that was accepted, right?

22 A No, there were parts of the recommended route that were not
23 included on the map communicated to us from C. T. Main. It
24 was not shown at all as being an alternative under considera-
25 tion at that time by them.

26 Q In terms of percentages of the overall transmission line route
27 adopted, approximately how much percent did you change from
28 that which C. T. Main had previously informed you was a pos-

1 sible route corridor?

2 A I would suggest in the neighborhood of 70 to 80 miles.

3 Q Seven to eight?

4 A Seventy to eighty.

5 Q What is the total distance of transmission line routes in-
6 volved as a result of the construction of the Colstrip gener-
7 ating complex?

8 A You mean the distance from Colstrip to Hot Springs?

9 Q And anywhere else required as a result of the installation of
10 those facilities?

11 A The distance along the recommended route was 426 miles.

12 Q Do you have any training in the study of earthquakes?

13 A No, I do not.

14 Q Can you tell me how many fault lines the transmission line on
15 the route selected from the generating station in Colstrip to
16 Hot Springs traverses?

17 A No, I cannot.

18 Q Are you familiar with any fault line which the transmission
19 line traverses?

20 A Not specifically. I would certainly expect there are a number
21 of fault lines associated with the mountains but I am not fam-
22 iliar with just where those are located. I might point out in
23 connection with that answer that seismicity is primarily an
24 engineering concern and one in which the engineer then is con-
25 cerned with what seismic events might occur and will then need
26 to design his line to withstand those seismic events. To that
27 extent it is really not an environmental issue but more of an
28 engineering issue.

1 Q For the record, can you tell me, Dr. Wahlquist, now many acres
2 of land will be cleared or dedicated for purposes of the trans-
3 mission line corridor?

4 A Well, it would be -- no, I don't have that figure. It would
5 be, what, 300 feet width times 426 miles. I don't have that
6 number calculated.

7 Q It's a few thousand acres, though, isn't it?

8 A Oh, yes.

9 Q How wide is the transmission line corridor?

10 A Three hundred feet.

11 Q Three hundred feet?

12 A Yes.

13 Q And that's for your 500kv lines, right?

14 A That's for two 500kv lines.

15 Q Did you look at any other transmission line corridors already
16 in existence in the state of Montana in considering what type
17 corridor you would recommend for the power company?

18 A Other transmission line corridors within the state were cer-
19 tainly a part of those we looked at in terms of possible alter-
20 natives, those that were within the study area that might have
21 opportunity for paralleling. This included the 500kv line
22 running from Hot Springs on west, the possibility of doubling
23 back along that line, so that portion of the Bonneville Power
24 500kv transmission line was looked at.

25 Q What is the width of the transmission line corridors used for
26 Bonneville Power Administration's lines?

27 A I don't recall.

28 Q In determining the landscape architecture involved as assoc-

1 iated with the transmission line corridors, did you consult
2 with Ted Wirth and Associates?

3 A Yes.

4 Q Did you have any disagreements?

5 A Not during the course of the contract, no we did not.

6 Q You have since, though, haven't you?

7 A That is correct.

8 Q Could you, for the record, tell me what the problem was?

9 A Mr. Wirth wrote a letter -- I don't remember if it was addres-
10 sed to me or to the Montana Power Company with a copy to me --
11 indicating his displeasure with the methodology as it was pre-
12 sented in our report and disclaiming his involvement in the
13 methodology of route selection.

14 Q Where is Ted Wirth's office?

15 A In Billings and in Phoenix. This was done, however, out of
16 the Billings office.

17 Q And that was registered with you after your contract was com-
18 pleted, right?

19 A Yes, I believe that that information was communicated to us
20 shortly after the meeting held here in Helena with the Depart-
21 ment of Natural Resources, which would have been, what, April
22 of '74 or March of '74, something along there. This would
23 have been within a month after that meeting, I believe.

24 Q Do you know if any changes were made as a result of Mr. Wirth's
25 objections?

26 A Do you mean in our analysis? No.

27 Q About the landscape architecture itself?

28 A I'm not sure if I understand the question.

1 Q Well, Mr. Wirth had some objections. He registered those ob-
2 jections with respect to some of the landscape architecture
3 plans. Did those objections cause any changes in those
4 architectural plans?

5 A Mr. Wirth's objections were not really related to landscape
6 architecture plans. Mr. Wirth's objections were to the fact
7 that he had not been a party to meetings with other consult-
8 ants and playing a larger role in the planning of the trans-
9 mission system.

10 Q He was retained by the Montana Power Company prior to the time
11 you came on the job, wasn't he?

12 A I believe he may have done work for Montana Power before. I
13 am not sure.

14 Q You really didn't spend too much time with him or inform him
15 of your progress during the time you were making your analysis,
16 did you?

17 A That is correct.

18 Q And that is why he registered the objection?

19 A That is correct.

20 Q Do you know how long he had been working on that transmission
21 line architectural problem?

22 A How long he had?

23 Q Before you got there?

24 A I am not aware of him working on this transmission line at all.
25 He had been doing another report for the Montana Power Company,
26 I believe. He may have been involved in the one running south
27 from Missoula through the Bitterroot Valley. I believe that
28 was with the Montana Power Company.

1 Q On page 5 of your written testimony, Dr. Wahlquist, starting
2 at line 23, in questioning your statement, "This tends to make
3 the eastern ponderosa forest, the savanna and the drier areas
4 of the western ponderosa forest more sensitive to disruption
5 than the Douglas fir forest," I will ask you, Doctor, what
6 studies in the field you conducted to determine the degree of
7 sensitivity of these species?

8 A Would you repeat that question, please?

9 Q What field studies did you undertake to determine the degree
10 of sensitivity to these species?

11 A None.

12 Q Where else in the United States have you ever conducted field
13 studies to determine the sensitivity of conifer trees such as
14 the ponderosa pine and the Douglas fir -- field studies?

15 A I attended graduate school in Utah and participated in a num-
16 ber of -- I personally have conducted no studies. I attended
17 graduate school in Utah and participated in a number of field
18 trips through montane regions dealing with forests in which I
19 feel I gained a good working knowledge of a number of these
20 species.

21 Q On page 7 of your written testimony, Dr. Wahlquist, line 9,
22 what studies have you conducted personally to determine the
23 population distribution of mule deer in and around the area of
24 Colstrip?

25 A Conducted none. The information presented here dealing with
26 wildlife comes from publications -- primarily the publications
27 from the Montana Fish and Game Department.

28 Q I would like you to go through, Dr. Wahlquist, the portions of

1 the statement which are nothing more than a recitation by you
2 of reports compiled by other people relating to wildlife.

3 Does that cover, really, page 6, 7, 8, 9, 10 and the top half
4 of 11?

5 A I have conducted no field studies in relation to wildlife.
6 This is taken from reports that were furnished to us by con-
7 sultants and from other literature information available of a
8 general nature and also from that specifically put out by the
9 Montana Fish and Game Department.

10 Q Tell me the cultural environment that you considered to deter-
11 mine proper transmission line routing.

12 A We concerned ourselves with demography. That is basically
13 where people live. We concerned ourselves with agriculture,
14 with visual quality. There are other aspects which I guess
15 we would consider cultural such as other transmission lines;
16 where they are located in the area is certainly a cultural
17 feature. Highways -- where they are. I don't remember what
18 all else I may have mentioned here but those are probably the
19 primary cultural features we concerned ourselves with.

20 Q Approximately how many acres of hay meadows did you destroy or
21 appropriate by virtue of the transmission line corridor sel-
22 ected?

23 A None.

24 Q How many did you affect at all?

25 A O.K., by that you mean -- O.K., the way you worded your ques-
26 tion, you asked in the past tense and I guess that's the rea-
27 son for my immediate response. Would you like to clarify that
28 question for me?

1 Q Sure. The way the transmission line goes now will affect how
2 many acres of hay meadows?

3 A I don't recall. As a part of that, basically in our initial
4 agricultural map that was prepared by Dr. Hayne for us, there
5 was a category in there which would have included hay meadows
6 and I don't remember now what the mileage was across that.

7 Q Let's take a look at page 11.

8 A One comment I would like to make in relation to hay meadows
9 before we pass on, and that is that there is really no reason
10 for a transmission line across hay meadows to have any par-
11 ticular impact.

12 Q Well, don't some of your transmission lines have fences around
13 them?

14 A No.

15 Q Gates over the roads?

16 A Only where the farmer already had fences. The only way it
17 would affect a hay meadow is the actual placement of the tower
18 itself and he would be able to manipulate on a hay meadow us-
19 ing fairly small equipment. He could farm underneath the
20 tower, he could farm inside the guy wires.

21 Q What is small equipment by your definition?

22 A Anything less than 20 feet in length.

23 Q How much does one of those rigs cost?

24 A You mean a large tractor?

25 Q Right.

26 A I haven't priced one for a long time. I'd guess in excess of
27 ten thousand dollars.

28 Q If you've got a big one, you'll need a little one. It's going

1 to mean a cash outlay to that rancher, isn't it?

2 A If his is too large to go underneath the tower, that would be
3 correct. He may well find that it's not worth it and if so
4 the total area that would be affected by a smaller tower would
5 be in the neighborhood of 30 feet by 30 feet.

6 Q How many towers along your route?

7 A The total number of towers? Well, if we figure that there are
8 about -- with two lines that would be eight per mile and if
9 we've got 400 miles, excess of 400 miles -- what's 8 times 4
10 -- probably 3,300 towers.

11 Q 3,300 towers by how many square feet?

12 A Well, a small percentage of those 3,300 towers are going to
13 be in hay meadows.

14 Q What small percentage?

15 A I would guess that no more than five to ten percent.

16 Q Did you take a survey?

17 A I could go back and measure on the map.

18 Q Just off the map you're going to be able to tell how many
19 towers that traverse hay meadows?

20 A We could also do that directly off the aerial photographs which
21 have been taken of the recommended route. However, C. T. Main
22 would be able to do that better than I since they have those
23 photographs.

24 Q But we are talking in the future now and when you were planning
25 this transmission line you did not survey, did you, to deter-
26 mine the amount of hay meadows affected by the placement of
27 these towers in the transmission corridors?

28 A We estimated the mileage that was crossed of various types of

1 irrigation land.

2 Q Well, I'm asking you, Dr. Wahlquist, whether or not you con-
3 ducted a survey in your planning activities to determine how
4 much was affected?

5 A And my answer to that is, we had an agricultural land use map
6 prepared and then we were able to determine mileages across
7 various categories of those agricultural land uses. That was
8 divided up into about three different categories of irrigated
9 lands of which these hay meadows would be a part of.

10 Q Did you count them up?

11 A Yes, we did.

12 Q Where is the information?

13 A That information is not contained in this testimony here.
14 That is correct.

15 Q Is it contained in any published document, such as the en-
16 vironmental analysis prepared by Westinghouse?

17 A I believe that it is but I would have to go and -- you may have
18 a copy of it there but I believe that information is in the
19 environmental analysis.

20 Q The actual amount of land area that has been affected by trans-
21 mission lines?

22 A No, there would be an estimate of various categories of irri-
23 gated land -- miles of various categories of irrigated land
24 that would be affected. But those would be estimates based
25 upon the mapping units that were derived.

26 Q So it really isn't focused on the information I am trying to
27 get from you regarding the amount of land area affected by
28 placement of towers in hay meadow?

1 A No, but the hay meadows would be contained in those mapping
2 units. They may not be the only unit in those mapping units
3 but they would be a part of that mapping unit.

4 Q How many farmers use tractors under those transmission lines?

5 A How many?

6 Q That are located over hay meadows? How many different farm
7 operations do you traverse?

8 A Well, that's two separate questions. Would you like to --

9 Q O.K., taking your starting point at Colstrip, Montana, and
10 moving on up to Hot Springs, Montana, how many different farm
11 units do you traverse?

12 A I have no idea.

13 Q Do you have an estimate?

14 A No.

15 Q Now, going to page 11 of your written testimony, directing
16 your attention to line 25, you give us an explanation of how
17 existing transmission lines can affect the location of new
18 lines in two contradicting ways--reliability and environmental
19 impact. How do you equate the two for purposes of locating a
20 new line?

21 A Basically, the system of reliability is defined by the engineers
22 and what they require for their system. The environmental
23 impact is the only portion which we would normally participate
24 in.

25 Q Would you say that the engineering and the reliability are
26 given more weight than assessment of environmental damage?

27 A I would say there is no need in detailing the assessment of
28 environmental damage, to invest millions of dollars in a system

1 that will not be reliable, and so until we have defined what
2 will be a reliable system, yes, once we know what may be con-
3 sidered reliable -- reliable as far as it is needed -- then
4 we'll consider environmental alternatives to that.

5 Q In other words, following that to its logical conclusion, you
6 can justify either way based upon economics, right?

7 A Justify either way? I'm not sure I understand what you mean
8 by that. If the system people indicate it will be reliable
9 to place this line next to another line, we can then consider
10 that in our environmental analysis. If the system people in-
11 sist that the lines will need to be separated, that it can't
12 be placed along that, then we will basically rule that out as
13 being an option.

14 Q Does your transmission line corridor cross any national forest
15 land?

16 A Yes, it does.

17 Q How much?

18 A I don't recall the number.

19 Q What clearance has been obtained to traverse that forest land?

20 A There have been meetings held with the forest service to dis-
21 cuss that option but there has been no final clearance obtained.

22 Q How about state forests?

23 A The same would be true there. No final approval has been ob-
24 tained to cross state forests.

25 Q How many wilderness areas does your transmission line corridor
26 traverse?

27 A None.

28 Q How many wildlife reserves?

1 A None.

2 Q How many flyways?

3 A The major flyway would be the Pacific flyway, which would be
4 more over in the Billings area. There is also a flyway, a
5 major flyway, that would be involved coming through -- and it
6 may be a subdivision of the same flyway, I'm not sure -- that
7 would really come through the Hot Springs area.

8 Q How many tribes are affected by the transmission line corri-
9 dor going over their Indian land?

10 A I believe the only tribe would be the Confederated Salish and
11 Kootenai Tribe. There may be some small parcels of Crow land
12 --that would have been between Colstrip and Broadview which
13 was the subject of another hearing. From Broadview on to Hot
14 Springs it would only be the Salish and the Kootenai.

15 Q Do you have permission to go over their land yet?

16 A No.

17 Q Have you been involved in any negotiations with them?

18 A Let me add in relation to the last answer -- we have not been
19 denied permission either.

20 Q Have you been involved in any negotiations?

21 A Yes.

22 Q What is the status of those negotiations?

23 A My only involvement in those negotiations was in 1963 in an
24 initial meeting we had with the -- or, 1973, excuse me --
25 correct that for the record -- with the tribe. I have not been
26 involved in negotiations with the tribe since 1973.

27 Q You don't know the status then other than the fact that no per-
28 mit has been granted to date?

1 A I am not aware of a permit being granted or of a permit be-
2 ing denied, no, but I am not aware of the status beyond that.

3 Q It wouldn't be too prudent, would it, to go ahead if you
4 don't have a permit?

5 A To go ahead with building the line, you mean?

6 Q Right.

7 A Well, you can't begin to build the line until you have a per-
8 mit.

9 Q You set forth in lines 18 through 20 of page 14 of your writ-
10 ten statement that the type of agricultural land use that is
11 most sensitive to transmission line impacts are dry land farm-
12 ing and sprinkler irrigated tracts. Of the transmission line
13 corridor ultimately selected and recommended by you, how many
14 acres of dry land farming are traversed?

15 A I believe that we indicated that there was a total of --
16 probably a maximum possible mileage which would have been
17 around 17 miles. However, the parcels of dry land farming
18 were broken up within that and if we were to take 300 acres
19 times however many miles that was, say 10 or 12, then you'd
20 come up with a total number of acres that would be within the
21 right-of-way across dry land farming. That, however, does not
22 necessarily represent -- it would be an over-estimate of the
23 amount that would be actually affected.

24 Q What estimate do you have?

25 A My estimate is less than 5 acres.

26 Q Between Colstrip and Hot Springs, less than 5 acres are af-
27 fected by dry land -- or transmission lines?

28 A Right. That estimate is based upon the fact that free stand-

1 ing towers would be used across dry land farming and that an
2 area in the neighborhood of 40 -- I believe I used 40 foot by
3 40 foot square -- would be taken out of production at the base
4 of each tower. I did not assume that there would be any util-
5 ization of large dry land farming equipment underneath the
6 free standing towers.

7 Q How many towers per mile?

8 A How many towers per mile?

9 Q Right.

10 A Four.

11 Q Double lines, eight?

12 A Double lines, eight. That is correct.

13 Q What impacts are you seeking to mitigate such as you address
14 on line 24, page 14?

15 A Line 24? O.K., the only involvement there for the sprinkler
16 irrigation system is if you have a large circular sprinkler
17 system in which you place a tower then it becomes very diffi-
18 cult to rotate that sprinkler system around a stationary ob-
19 ject. Those can be mitigated by careful placement of the tower.
20 Since these are basically circles that don't overlap, there is
21 usually a space between the circles that the tower could be
22 placed.

23 Q How many miles of access roads are being built?

24 A The estimated total mileage of access roads?

25 Q Right.

26 A I don't recall right off-hand. I would guess our estimate
27 would be somewhere in the neighborhood of 400 to 500 miles.

28 Q How many of those roads are going to be closed after the trans-

1 mission line is in?

2 A That will depend primarily upon the landowner. The guide-
3 lines on access road closing, that, I believe--and other
4 things of that nature--will be covered by Mr. Zobel, but as
5 far as the forest service and people of that sort are con-
6 cerned, that will be up to them and to a large extent with
7 landowners, too, to what extent they will want restoration or
8 destruction of those access roads once construction is com-
9 pleted.

10 Q On page 19 of your statement, line 10, you talk about lines
11 could follow existing corridors north toward Arlee and Dixon
12 and on to Hot Springs. Have you established where that cor-
13 ridor is going to be placed?

14 A What page?

15 Q Page 19, line 10.

16 A This was in the consideration of alternatives. The particular
17 part that you're referring to right there is not part of the
18 recommended route.

19 Q So it doesn't really have anything to do with what we are
20 talking about where the transmission line is going to go now,
21 right?

22 A No, that is correct.

23 Q On page 22 of your statement, you talk about factors that were
24 identified in determining the recommended route to use. One
25 of those factors is the response of local consultants and I
26 would like you to tell me, Dr. Wahlquist, who the local con-
27 sultants you used were in agreement with the recommendation
28 you ultimately made.

1 A The response from local consultants was obtained by sending
2 them a copy of the alternative corridor map and asking them to
3 select that route that they thought was most preferable, based
4 upon their discipline, and so I don't think that any of them
5 would have ultimately agreed with all aspects of what the
6 final recommended corridor would have been. Portions of them
7 agreed with some and disagreed with others.

8 Q Were those consultants only those on retainer to the power
9 company or did you go to other agencies of the state govern-
10 ment?

11 A Those maps were sent and comments received from those who were
12 under retainer to Westinghouse.

13 Q Did you send those proposed maps to any state government agency?

14 A I did not, no. I'm not aware of sending them. They went to
15 the forest service and they went to the Indians. I am not
16 aware of sending them to the state. We had some conversation
17 with the Department of State Lands at that time but they were
18 primarily concerned with the reclamation and were not really
19 concerned with the transmission line siting at that time.

20 Q Who told you that from the State Lands?

21 A That was in a conversation -- well, I had a phone call at one
22 time from Ms. Sharon Solomon who was requesting information
23 and I mentioned to her that I was primarily involved in the
24 transmission line and she indicated that she was looking for
25 further information and so I -- more involved with the mine
26 and the involvement at the mine at that time, and so I referred
27 her to Dr. Edmonds --

28 Q Doctor who?

1 A Dr. Edmonds -- and so that was, as I remember, probably the
2 only contact I had with the state.

3 Q What was this person's name? I didn't get it clear.

4 A Sharon Solomon. She was with the Department of State Lands
5 at that time.

6 Q Do you know what her job was with the Department of State
7 Lands?

8 A I don't know her job title, no. The other contact that we
9 would have had with the state, I should point out, was -- and
10 I guess the only major contact we had with the state would
11 have been at the Big Sky meeting in September of '73, at
12 which time they were present when the alternatives were pre-
13 sented, and a description and a discussion of the recommended
14 route.

15 Q That was in May of 1973?

16 A That was in September of '73.

17 Q That was after the application had been filed, wasn't it?

18 A After the application for Colstrip 3 and 4?

19 Q Right.

20 A Yes. However, I am not aware of the fact that a recommended
21 route was involved in the application for Colstrip 3 and 4.

22 Q What was the date of your environmental analysis?

23 A The published date, I believe, was December or November of
24 1973.

25 Q November of '73 -- and do you know how long it was to the
26 printers before it was released?

27 A I think our last involvement with corrections going into that
28 report would have been right around November 1.

1 Q Right. And you had made your recommendations at that time,
2 hadn't you?

3 A Yes.

4 Q Prior to November 1?

5 A Yes.

6 Q Following the Big Sky conference, what further contact did
7 you have with the Department of State Lands?

8 None.

9 Q Who from State Lands was at the Big Sky conference?

10 A I don't recall.

11 Q Was anybody?

12 A Yes, I recall for one that Ms. Solomon was there. I don't
13 know who else. I'm not aware of that much of the personnel
14 of the Department of State Lands to know.

15 Q How long did that conference last?

16 A One day.

17 Q On page 29 of your statement, you start about line 10 talking
18 about the adverse effects and proper construction practices
19 and certain construction guidelines. Have you ever reviewed
20 any contracts with the construction contractors to determine
21 what guidelines specifically were included in the contracts?

22 A Have I ever done that?

23 Q Yes, with respect to the Colstrip project?

24 A No, not with respect to Colstrip.

25 Q Have you seen the construction guidelines?

26 A For Colstrip?

27 Q Right.

28 A I have read Mr. Zobel's testimony, yes.

1 Q Well, you haven't reviewed the guidelines themselves, how-
2 ever. You just said you just reviewed his testimony. I want
3 to know if you were ever consulted by the applicants to de-
4 termine what should be included in the construction guidelines
5 for contractors?

6 A Yes, to a large extent we were the author of those guidelines.

7 Q Have you seen those guidelines as they will be included in a
8 bid package?

9 A No, I have not seen a bid package, no.

10 HEARINGS EXAMINER: We had better stop so we can
11 change the tape.

12
13 (RECESS AT 12:50 P.M.)

14
15 Following a brief recess, the hearing reconvened at 1:00 P.M.,
16 on January 30, 1976.

17 HEARINGS EXAMINER: We will proceed.

18
19 CONTINUATION OF EXAMINATION OF BRENT T. WAHLQUIST

20 Cross, by Department of Natural Resources and Conservation

21 By Mr. Sheridan (continuing):

22 Q Would you turn to page 29 of your statement?

23 A 29?

24 Q Right. Let's talk -- starting at line 21, you say the impacts
25 upon the physical environment associated with those transmis-
26 sion lines are not expected to be severe. Would you list in
27 the order of severity the effects you expect to encounter?

28 A In severity?

1 Q Yes, in the order of severity.

2 A Do you want me to limit that to physical environment? O.K.,
3 I would expect that the most severe thing on the physical
4 environment would probably be erosion.

5 Q Just go ahead and list them and then we'll go over them.

6 A The other thing would -- and that really relates -- really
7 erosion is about it. The possibility, the potential for small
8 land slides, things of that sort, might be second. Stream
9 crossings again relate to erosion to some extent, and siltation
10 of streams. You might list that as a separate one which
11 would then put it in about the third category, I would think--
12 about third position, siltation of streams.

13 Q What efforts have been planned to your knowledge to under-
14 take to minimize the severe erosion hazards in that 35-mile
15 stretch you're referring to in your statement.

16 A To minimize the erosion hazard? Those are stated in the con-
17 struction guidelines which would be a part of Mr. Zobel's
18 testimony. Basically, though, those guidelines involve such
19 things as cross ditches and the way that the access roads are
20 constructed, the way that cuts can be made, the casting of
21 dirt to avoid channeling of water, re-channeling of water in-
22 to areas other than where they have currently been going.

23 Q You have about 22 percent of the transmission line corridor
24 which is going to be subjected to moderate to severe erosion
25 hazards, right?

26 A I would believe that might be correct. I don't remember doing
27 it in percentage. I think here it's listed in miles but I
28 will accept that.

1 Q It's a little less than 100 miles, right?

2 A O.K., right.

3 Q Where is that 35-mile stretch?

4 A I would have to look at the map. I would expect, though,
5 that that 35-mile stretch is either -- and it may be spread
6 over about three different areas -- probably the Big Belt
7 mountains, the area of the Continental Divide, and probably
8 some in the area of Jocko Pass. I would expect that it would
9 be in those three areas.

10 Q So it's not just one 35-mile stretch that's localized; it's
11 about three different areas comprising 35 miles which are
12 subjected to --

13 A I would expect that is true. We could obtain that information
14 quite easily by going to the last table and adding up the
15 erosion hazard that is involved in different segments and see
16 where those segments crossed. It would be easy to determine
17 that from within the table in the testimony here but I haven't
18 done that determination

19 Q Are you aware of any consulting agreement between the power
20 company and Westinghouse for you to continue to advise the
21 applicant after the installation of these lines, assuming
22 they are installed?

23 A No, that hasn't been discussed.

24 Q Would you list for me in order of severity the impacts upon
25 the biological environment that you think will occur?

26 A The principal impact on the biological environment will be the
27 clearing of trees.

28 Q What does that do to the environment where trees have been

1 removed?

2 A Nothing, really. I mean, it's a standard practice. The im-
3 pacts on the biological environment are really quite small
4 compared to other things that might be done, such as clear-
5 cutting and other things of that nature. By the clearing of
6 the trees it basically begins to alter to some extent the
7 nature of the habitat for -- and the ecosystem for what other
8 vegetation is there. The trees are the dominant species in
9 those forest areas and whenever you remove the dominant spe-
10 cie, that's the thing that creates the greatest havoc for the
11 ecosystem.

12 Q Are you going to clear-cut the trees within the transmission
13 line corridor?

14 A No.

15 Q What are you going to do, trim them every year?

16 A The guidelines state that they will be selectively cut and I
17 am not aware of just how that -- what is really planned there.
18 Typically, things of that sort is that anything over a certain
19 height, such as 12 feet will be cut, or over 18 feet -- some-
20 thing on that nature -- and they would be gone over, maybe
21 every 5 to 10 years and anything that's getting over 15 or 18
22 feet would begin to be cut. Those things I would expect to be
23 worked out with the forest service because the forest service
24 is the primary controlling agent over most of those forested
25 lands. Other landowners may have other ideas and I would ex-
26 pect that the specific nature of those guidelines would be
27 dictated by the landowners, whether that's the Indians or the
28 forest service or private holdings.

1 Q What field studies have you ever conducted on a controlled
2 basis to determine the effect of the installation and con-
3 tinued operation of a transmission line through a wildlife
4 habitat?

5 A I personally have not conducted any field studies. We were
6 party to setting up a field study along the transmission line
7 from San Juan, New Mexico, which is near the Four Corners
8 power plant, to Tucson, Arizona. That study, however, was
9 being implemented by Dr. Charles Lowe of the University of
10 Arizona. We helped implement that study and have been in con-
11 tact with Dr. Lowe since that time regarding his findings,
12 but it was not actually carried out by Westinghouse.

13 Q His study is not complete, is it?

14 A Well, it began in 1971 and I don't know if there was a spe-
15 cific completion date. It has been going on on a yearly basis
16 with seasonal studies for the past four years.

17 Q Of course the wildlife inhabiting the areas traversed by the
18 Colstrip to Hot Springs transmission line are different not
19 only in population but also species than those which were
20 affected by the Tucson Gas and Electric transmission lines,
21 right?

22 A Some were different; many were the same. That line ended up
23 going through ponderosa forest and went through juniper areas
24 and so many of the major game species such as mule deer, ante-
25 lope, are involved in that as well as this line.

26 Q What about endangered species? First of all, what endangered
27 species are found on the transmission line corridors in the--

28 A Well, the only way you can answer that is those which might

1 be expected to occur. That is, does the transmission line
2 cross a portion of their range, and those would be such things
3 as the peregrine falcon. The possibility on the far east end
4 of the line -- however, that part is already under construc-
5 tion -- it might touch on the black-footed ferret. I believe
6 that we mention in here the -- those may have been the only
7 two that were actually on the endangered species list. I
8 don't remember if there was another one or not.

9 Q Have you ever been involved personally with the conduct of a
10 field study to determine the effects of a transmission line
11 upon those endangered species?

12 A I have not. The peregrine falcon is again found in New Mex-
13 ico and would have been a part of that study. They occur
14 throughout the United States. But I personally was not in-
15 volved in that. There is no evidence, however, from that
16 study of it affecting the peregrine falcon.

17 Q You just told me, Dr. Wahlquist, that you didn't know what
18 the findings were of that study.

19 A No, you asked me if that study was complete and I said no.
20 We have been in discussion with Dr. Lowe concerning that
21 study for the past four years from time to time. When I see
22 Dr. Lowe -- how's the study going -- and we discuss what he
23 has learned and what's happening but I'm not -- I have not
24 seen formal reports. It's been an informal discussion with
25 Dr. Lowe and that's it.

26 Q Who is Dr. Lowe hired by?

27 A Who is paying his bill?

28 Q Right.

1 A That study is under contract with Tucson Gas and Electric.
2 I should point out, too, though, in that aspect, that I believe
3 a portion of that funding is also coming from university funds.
4 The full support for that study was not coming from Tucson
5 Gas and Electric. They were supplying partial support, as I
6 understand it, and a portion was coming from university funds
7 of some sort.

8 Q Under grants provided the university by whom?

9 A I am not aware.

10 Q What specific criteria did you adopt in determining the en-
11 vironmental feasibility and acceptability for the route from
12 the generating station at Colstrip to Hot Springs?

13 A Basically the -- the question was, what criteria?

14 Q Yes.

15 A Those would have been the discussions we had with agencies
16 and councils involved on portions of the right-of-way. It
17 would have been our own impressions as we conducted reconnaiss-
18 sance over the area in terms of terrair features and terrain
19 problems, the feed-back that we obtained from our consultants
20 basically concerning which route they recommended based upon
21 their particular discipline and the information as contained
22 in Table I of the testimony, which is basically a quantitative
23 listing of various what we might call categories, descriptive
24 features of the transmission system.

25 Q Was there one overriding criteria which you adopted in the
26 development of the analysis of alternative routes for the
27 transmission line corridor?

28 A One overriding criteria?

1 Q Yes.

2 A No, not really. I think one of the major -- if we were to
3 list them in the order of importance, some might be a bit
4 more important than others but there was not one which total-
5 ly dominated.

6 Q So you are talking engineering reliability, environment--

7 A Engineering reliability really didn't play any role in con-
8 sideration of corridors here other than what had been dicta-
9 ted to us and the fact that we needed to begin at one point
10 and end at another and pass through the general area of
11 Helena in the middle.

12 Q You weren't given any cost constraints?

13 A Not per se, no. It was certainly the impression that Montana
14 Power and the other applicants would like it to be as short
15 as possible. They weren't really looking for any extra
16 length but there were no constraints placed upon us in that
17 way at all.

18 Q Am I to understand that in the selection of the transmission
19 line corridors, considerations of engineering and transmission
20 reliability played no part?

21 A Not in our analysis. We are not experts in those areas.

22 Q Well, I assume, Dr. Wahlquist, that in your analysis you found
23 it necessary to consult with the slide rule boys to determine
24 whether or not the proposed route was going to be engineering-
25 wise feasible and system-wise reliable.

26 A That's true. We did have discussions with representatives
27 of C. T. Main concerning the various alternatives. There was
28 never any indication received from them that any of the alter-

1 natives we were considering would not fit those criteria, but
2 we did discuss the routes as they were -- and the various
3 alternatives that they had suggested once which we had added.
4 Things of that sort were discussed with the members of the
5 C. T. Main staff and we received no feed-back that any of
6 them would be unreliable or engineeringly unfeasible.

7 Q So, I suppose then the criteria that you adopted would be --
8 or best set forth in your paragraph 2 on page 2, starting at
9 line 5, is that right?

10 A Yes, I believe that is a reasonable summary of what we were
11 attempting to do.

12 Q Your criteria or your objectives?

13 A Are you saying the criteria or the objectives?

14 Q Isn't that what it is?

15 A I'm not sure if I understand what you're meaning about
16 criteria here.

17 Q Well, I want to know what your criteria was in determining
18 which route you were going to use.

19 A O.K., the idea that those stated in part C here, in terms of
20 the environmental, social impacts of construction and opera-
21 tion are criteria?

22 Q Right.

23 A Yes, that would be correct.

24 Q O.K., what environmental criteria did you use?

25 A Environmental criteria? The environmental criteria included
26 the amount of forest land crossed. It included the -- there
27 are a number of things here that might be difficult to dis-
28 tinguish between environmental and social--such things as the

1 existence of -- where existing transmission lines occurred
2 was a principal factor, the evaluation of people who lived
3 along -- or of administrative bodies that controlled portions
4 along the routes, such as the forest service. Other major
5 criteria as far as environmental was concerned was terrain.
6 If we were to list one principal criteria that would have
7 been overriding it would have been terrain.

8 Q Terrain is your overriding environmental criteria?

9 A Yes, I would say that.

10 Q Nothing further?

11 A You mean, is that our only criteria? Most other features of
12 the environment were associated with terrain so they were
13 considered, in effect, with that -- such things as -- and,
14 again, many of these are social--various land use patterns,
15 where wildlife occurred, where vegetation occurred -- many
16 of these could be associated with terrain, and so these again
17 made terrain the overriding criteria but it did not mean that
18 the others were being ignored.

19 Q Right, but your overriding criteria was terrain?

20 A That is correct.

21 MR. SHERIDAN: I have nothing further.

22

23 Redirect, by Applicants

24 By Mr. Peterson:

25 Q First of all, Dr. Wahlquist, during your testimony some con-
26 fusion arose in my mind when you were discussing the width of
27 the corridor as opposed to what may be proposed as the width
28 of the right-of-way. I believe Mr. Sheridan's question had

1 to do with corridor width and you answered 300 feet. What
2 does the 300 feet relate to?

3 A That's the width of the right-of-way.

4 Q Now, also there was a discussion as to 400 to 500 miles of
5 line being from Colstrip to Hot Springs. Is that figure
6 appropriate at the present time in view of the fact that
7 there has been construction of this line from Colstrip to
8 Broadview?

9 A If we were to subtract out the -- you are talking here of
10 what -- the line or the access roads or--?

11 Q Yes, 400 miles of access roads.

12 A O.K., if we were to subtract out that portion of access road
13 between Colstrip and Broadview, and by taking those segments
14 and adding up the figures that are listed in Table I, you
15 come up with approximately 350 miles from Broadview on to
16 Hot Springs as the estimated mileage of access road.

17 Q In your association with Mr. Wirth, was there ever any crit-
18 icism by that organization as to the results of your work?

19 A The criticism was not directed at the recommended route.

20 Q Now, with regard to the acres of hay meadow that may be af-
21 fected by reason of the preferred route, is there any esti-
22 mate that you can give relative to that question where you
23 answered that you didn't recall?

24 A That estimate -- in the Colstrip environmental analysis pre-
25 pared by Westinghouse, there are figures given in section 3.6
26 which indicate the mileage crossed of mixed dry land and ir-
27rigated land and things of that sort. I would expect to find
28 that most of the hay meadows would occur within the mixed dry

1 land area, as it was defined in our report, and that was
2 around 68 miles of mixed dry land that we expected to cross.
3 I would expect then that the hay meadows to be crossed would
4 be a certain percentage of that, probably in the neighbor-
5 hood of 25 to 30 percent of that.

6 Q In your discussions with Dr. Lowe regarding the possible ad-
7 verse impacts on wildlife because of the transmission line
8 down in Arizona, were there ever any reports by him to you
9 of any adverse effects on wildlife?

10 A No, we were just basically asking if anything significant had
11 been discovered so far. He began those studies in 1971. Con-
12 struction was begun on that line then -- or they may have --
13 the initial study was done in '71 and the seasonal or yearly
14 study began in '72. The line construction began in '73 and
15 was completed in '74, so the line is now operational, and
16 today we have no feed-back of any adverse effects on the wild-
17 life there.

18 Q After the meeting in Big Sky in September of 1973 with var-
19 ious personnel from state agencies, have you ever had a re-
20 quest from any of those state agencies for additional inform-
21 ation regarding the work you have done for the applicants in
22 this case and selection of the preferred route? In other
23 words, have they ever come to you --

24 A No, nothing other than those things that came right directly
25 out of the Big Sky meeting. There were certain discussions
26 and questions that arose at the Big Sky meeting and those
27 were responded to and we have had no other feed-back related
28 to the transmission line that I can remember of from the state

1 agencies.

2 Q And with regard to your reliance in your testimony on the
3 reports of wildlife and inventory of wildlife, which you say
4 you have used as a source the Fish and Game reports, do you
5 consider those reports valid?

6 A I have no reason to dispute them, and then involved in our
7 reconnaissance of the transmission line, which might be termed
8 a windshield survey, we saw nothing in that that would lead
9 us to dispute anything that we found in the information sup-
10 plied to us, or that we obtained from the Fish and Game.

11 MR. PETERSON: May I have just one minute, Mr.
12 Davis?

13 HEARINGS EXAMINER: Certainly.

14 MR. SHERIDAN: Let the record show that Dr. Wahl-
15 quist has left the stand to go back and confer with his
16 counsel before the last question is asked.

17 MR. PETERSON: Let the record show that I didn't
18 consult with Mr. Wahlquist.

19 Q Mr. Wahlquist, with regard to the number of acres that you
20 have shown on page 30 of your statement with regard to -- or,
21 rather, on page 25, or line 25 --

22 A Line 25 of which page?

23 Q Page 30, with regard to the number of acres that will be re-
24 quired for the selective management to avoid interference
25 with tall trees, my question is, does that 2,500 include the
26 700 and the 300 which you have discussed on the lines begin-
27 ning on line 22?

28 A It would include the 700 because that basically would be those

1 areas that would potentially be disturbed for tower construc-
2 tion and that would all be within the right-of-way. The 300
3 acres of access roads would also largely occur within the
4 right-of-way, though there might be some minor areas in which
5 the access road might require leaving the right-of-way, but
6 we could expect that 90 or 95 percent of that would also oc-
7 cur within that 2,500 acres.

8 Q And with regard to the same 2,500 acres which you state will
9 be temporarily disturbed during construction for the location
10 of towers, how did you compute that?

11 A That's simple arithmetic, taking the 300-foot right-of-way
12 and multiplying it by 70 miles of forest land, with proper
13 conversion to feet and acres, of course.

14 MR. PETERSON: I have nothing further.

15

16 Re-Cross, by Department of Natural Resources and Conservation

17 By Mr. Sheridan:

18 Q Dr. Wahlquist, the Big Sky meeting was held in 1973, wasn't
19 it?

20 A That is correct.

21 Q And you state that since that time that no state agency rep-
22 resentative has requested additional information of you, is
23 that right?

24 A To the best of my recollection, no.

25 Q What were you doing in Pittsburgh, Pennsylvania, on March 27,
26 1975?

27 A A deposition was being taken.

28 Q Yes, we spent a few hours together and I asked you many ques-

1 tions and I asked for additional information, didn't we?

2 A O.K., I will accept that. Yes, you did.

3 MR. SHERIDAN: Nothing further.

5 Re-re-direct, by Applicants

6 By Mr. Peterson:

7 Q Was Mr. Sheridan at the meeting with the state agency people
8 in 1973 in September at Big Sky?

9 A No.

10 MR. PETERSON: That's all I have.

11 HEARINGS EXAMINER: Very well. Do you have any
12 objections to the exhibit, Mr. Sheridan?

13 MR. SHERIDAN: None.

14 HEARINGS EXAMINER: Exhibit 92 is admitted. You
15 are excused, sir. Thank you for your testimony.

17 (WITNESS EXCUSED)

19 HEARINGS EXAMINER: What time would you like to
20 resume?

21 MR. PETERSON: May I suggest 1:35?

22 MR. SHERIDAN: How about a little later. I have to
23 see Dirty Harry, the barber. (Laughter)

24 MR. PETERSON: I don't have the next witness, so
25 I really don't care.

26 HEARINGS EXAMINER: We will recess until 2:30.

28 (RECESS AT 1:30 P.M.)

1 Following a brief recess, the hearing reconvened at 2:48 P.M.
2 on January 30, 1976.

3 HEARINGS EXAMINER: Mr. Ross?

4 MR. ROSS: The applicants would now like to call
5 Warren P. Schmechel, and a copy of Mr. Schmechel's
6 direct testimony has been filed with the court reporter
7 and was previously served on all parties to this
8 proceeding. The applicants now offer Applicants'
9 Exhibit number 37. And finally, for the record, we'd
10 like the record to show that Mr. Kit Lower of Northern
11 Plains Resource Council was consulting with the attorney
12 for the Department of Natural Resources prior to the
13 examination of Mr. Schmechel.

14
15 WARREN P. SCHMECHEL, called as a witness by the applicants, having
16 been first duly sworn upon his oath, both as to his written direct
17 testimony and as to the oral testimony to follow, was examined
18 and testified as follows:

19
20 (THE WRITTEN DIRECT TESTIMONY OF MR. WARREN P. SCHMECHEL
21 WAS DIRECTED TO BE INSERTED AT THIS POINT.)

1
2 STATEMENT OF TESTIMONY OF
3 WARREN P. SCHMECHEL
4

5 My name is Warren P. Schmechel and my home address is
6 1049 West Porphyry Street, Butte, Montana. I am President and
7 Chief Operating Officer of Western Energy Company, and Vice
8 President of The Montana Power Company.

9 I am a graduate of Montana State University, where I
10 received a Bachelor's Degree in Electrical Engineering in 1953.
11 Between 1957-60, I took a course in natural gas production and
12 transmission through the International Correspondence Schools,
13 and in 1965, completed a course in historical geology at Montana
14 College of Mineral Science & Technology, and also attended the
15 program for Management Development at Harvard Business School.

16 I am a registered professional engineer in the State of
17 Montana. I currently serve on the Montana Advisory Board of
18 the Bureau of Land Management, representing the energy resources
19 industry; Board of Directors of the Montana Energy and
20 Magneto hydrodynamics R & D Institute; Board of Directors and
21 President of the Endowment and Research Foundation at Montana
22 State University; Board of Directors of Montana College of
23 Mineral Science and Technology Foundation; and as a member of
24 the Federal Power Commission Technical Advisory Committee on the
25 Impact of Inadequate Electric Power Supply. I am also a member
26 of the Board of Directors of Western Energy Company and
27 Northwestern Resources Co., a wholly-owned subsidiary thereof.

28 I have worked as a full-time employee for The Montana Power
Company and/or its wholly-owned subsidiary, Western Energy
Company, since 1953. Prior to my responsibilities with Colstrip

1 and Western Energy, my work with The Montana Power Company
2 included work involving electric distribution and transmission
3 lines, gas-fired equipment, and gas wells. In 1961, I was
4 advanced to the position of Executive Assistant to the officers
5 of The Montana Power Company and was at that time assigned a
6 special responsibility of management and development of the
7 Company's interests at Colstrip. I was named Vice President
8 and General Manager of Western Energy Company in 1968 and Vice
9 President of The Montana Power Company in 1973, and effective
10 December 2, 1975, I became President and Chief Operating
11 Officer of Western Energy Company. Since 1961, I have been
12 responsible for management of the Company's coal properties,
13 including planning the mine development, purchase of major
14 mining equipment and negotiations of coal sales. Since 1961,
15 I have also been responsible for the management and development
16 of the townsite of Colstrip. In carrying out these responsibilities,
17 I have under my control a number of supervisory personnel, including
18 a project manager for the Town and the mining operations at
19 Colstrip, a manager for planning, a manager for exploration and
20 development, and a manager for accounting and sales.

21 A brief history of the Colstrip mine and reasons for its
22 acquisition by The Montana Power Company is appropriate at this
23 point.

24 The Rosebud mine at Colstrip, Montana, was opened in 1924
25 by the Northern Pacific Railway Company as a low-cost source of
26 fuel for its steam locomotives. The railway company operated the
27 mine through its contractor, Foley Brothers, Inc., until 1958.
28 In 1958, Northern Pacific replaced its last steam locomotive with

1 diesel power, and closed its Colstrip mine and offered the
2 Colstrip properties for sale. In 34 years of mining, the
3 Northern Pacific Railway Company produced 44 million tons of coal
4 to fuel its engines. During its mining operations, Northern
5 Pacific disturbed approximately 1,000 acres of ground at Colstrip,
6 most of which has been reclaimed by Burlington Northern, Inc.

7 In 1959, The Montana Power Company was predominantly a
8 hydroelectric company. However, at that time, with its
9 knowledge of potential hydroelectric power sites that could be
10 developed economically, the Company was aware that alternate
11 sources of energy would have to furnish future electrical
12 requirements of its customers. Therefore, in 1959, Montana Power
13 acquired from Northern Pacific mining leases covering approximately
14 75 million tons of proven coal reserves, certain large mining
15 machinery, the townsite and accompanying town properties at
16 Colstrip. In 1965, Western Energy Company was formed as a
17 subsidiary of Montana Power to manage the Colstrip properties
18 and development. Additional mining leases, machinery and land
19 have been subsequently acquired by Western Energy Company.

20 In 1968, Western Energy re-opened the Rosebud Mine at
21 Colstrip. Coal was produced initially for The Montana Power
22 Company's Corette Steam Electric Generating Plant at Billings,
23 commencing in July, 1968. Thereafter, Western Energy Company
24 entered into contracts for the sale of coal to other utility
25 and industrial customers in the Midwest. Coal production since
26 1968 has been as follows:

27 1968 - 150,000 tons
28 1969 - 521,000 tons
1970 - 1,658,000 tons
1971 - 5,161,000 tons

1 1972 - 5,501,000 tons
2 1973 - 4,254,000 tons
3 1974 - 3,212,000 tons
4 1975 - 6,400,000 tons

5 Projected production for 1976 is 10,300,000 tons; 1977, 13,000,000
6 tons; 1978, 13,200,000 tons; 1979, 14,600,000 tons. Assuming
7 that Colstrip Units 3 and 4 will be constructed and will be in
8 operation, coal production is projected to reach 19,000,000 tons
9 by 1981.

10 There are two seams of coal in the Colstrip area, the upper
11 bed termed the Rosebud seam and the lower bed termed the McKay
12 seam. The Rosebud seam is generally 21 to 25 feet thick, and
13 the McKay seam averages approximately 8.5 feet thick. We are
14 presently mining the Rosebud seam. We have endeavored to
15 develop markets for the McKay seam coal, but have not been
16 successful to date. The sulfur content of McKay seam coal
17 approaches twice that of the Rosebud seam coal, making it
18 undesirable when compared to other coal which is available in the
19 Montana-Wyoming area.

20 A plan which confirms our independent findings for removal
21 and replacement of the McKay seam parting has been developed under
22 a study entitled "Alternate Methods of Handling the Parting
23 Between Two Coal Seams", which was prepared by the Montana College
24 of Mineral Science and Technology Foundation. The term "parting"
25 refers to the earth material separating the Rosebud and McKay
26 coal seams. The plan would result in minimum environmental
27 degradation; it contemplates replacement of the parting
28 material into approximately the same horizon where found before
 its removal. Thus, if we are able to develop a market for the

1 McKay seam coal, we are confident it can be produced economically
2 and the land reclaimed successfully. Our marketing efforts in
3 this respect are continuing.

4 Reclamation of mined lands at Colstrip has been a governing
5 corporate philosophy since mining was resumed by Western Energy
6 Company. I have personally been involved in carrying out that
7 philosophy. In 1968, two years before it would be necessary
8 to commence stripping operations to uncover additional coal at
9 Colstrip, we contracted with the Agricultural Experiment Station
10 at Montana State University (MAES) to conduct research with the
11 objective of developing a comprehensive reclamation program
12 that would result in restoration of mined land to its pre-mining
13 use or to a higher use. The reclamation program was initiated
14 before the State of Montana had compulsory reclamation laws.
15 By the time the Montana Strip and Underground Mine Reclamation
16 Act (Reclamation Act), Section 50-1034, et seq., R.C.M. 1947,
17 had been enacted, the Colstrip reclamation program had been
18 developed to the point where it substantially complied with the
19 provisions of the Reclamation Act.

20 Western Energy Company, under my supervision and direction,
21 must now conduct its mining and reclamation activities in
22 accordance with the extensive and comprehensive provisions and
23 regulations of the Reclamation Act. My staff, pursuant to the
24 Reclamation Act, now studies the past and present uses of the
25 land and water in the area to be affected by our mining operation
26 and submits these, along with our proposed mining and reclamation
27 plans, to the Montana Department of State Lands for their review
28 and approval. The Department of State Lands, under the

1 Reclamation Act, can now deny a strip mining permit if it finds
2 that the intent of the Reclamation Act will not be fulfilled
3 or if the Department determines that the land proposed for mining
4 has special, exceptional or unique characteristics. For example,
5 land is defined as having unique characteristics if it possesses
6 unique scenic, historic, archaeologic, ethnologic, geologic,
7 cultural or recreational significance, with particular attention
8 given Plains Indian history and culture. Western Energy
9 Company must also pose a bond which is conditioned upon the
10 faithful performance of the requirements set forth in the
11 Reclamation Act and its permit from the Department of State Lands.
12 Therefore, I think that the strip mining and reclamation is
13 being well monitored, and done in accordance with environmental
14 rules and regulations to insure minimum adverse environmental
15 impact.

16 Since July, 1968, approximately 27 million tons of coal have
17 been mined and 1,140 acres of land have been affected by our
18 mining operations and associated activities at Colstrip, including
19 haul roads, shop sites, electrical installations, and topsoil
20 stockpiles. Approximately 706 acres have been directly involved
21 in mining with approximately 230 of these acres now having a re-
22 established vegetative cover. One hundred acres have been
23 reclaimed as a result of various reclamation research projects. The
24 remaining 130 acres were seeded in May, 1973 and I am advised that
25 these reclaimed lands will now produce up to 2,500 pounds of
26 vegetation per acre, compared with only 900 pounds per acre on
27 lands adjacent to the mined area. Sixty acres within this tract
28 of reclaimed land at Colstrip is being used for a livestock grazing

1 research project by the Montana Agricultural Experiment Station
2 (MAES). The Montana Agricultural Experiment Station periodically
3 evaluates the vegetative species composition to determine the
4 weight contributed by each plant species.

5 Further, 412 acres of the approximately 706 acres directly
6 involved in mining, have been regraded and topsoiled, of which
7 300 acres are now seeded with a permanent mixture of predominantly
8 native species.

9 When The Montana Power Company acquired the Colstrip
10 properties, the townsite of Colstrip then consisted of approximately
11 61 houses, including both single-family units and duplexes,
12 only part of which were occupied by ranch families and former
13 employees of Foley Brothers, Inc., who mined the coal for the
14 Northern Pacific Railway Company. The population of Colstrip
15 in 1960 was approximately 75, and had declined from its
16 peak in 1944 of six to seven hundred.

17 One of the primary objectives of Western Energy Company
18 since being in the Colstrip area, is to provide an attractive
19 community which would alleviate the impact on the population
20 already in the area, and accommodate the population attracted to
21 the area.

22 When Western Energy Company resumed mining at Colstrip,
23 it undertook a program to refurbish certain of the houses and
24 other buildings in the town, in order to provide for the increase
25 in personnel involved in the mining operation. Eight of the
26 older single-bedroom houses were remodeled in 1971 by enlarging
27 the living room area and adding a second bedroom. A four-unit
28 apartment building, empty for many years, was completely renovated

1 Also, we found that a number of the Operating Engineers Union
2 members who were being hired for the mining operation had large
3 trailer homes and preferred to move them to Colstrip for their
4 residences. Thus, in 1971 we began construction of a 60-unit
5 permanent mobile home court. Subsequently, two additional
6 permanent trailer courts were added by Western Energy.

7 In 1971, Western Energy Company interviewed a number of
8 firms involved in land and community planning, and subsequently
9 contracted with the Ken R. White Company of Denver, Colorado,
10 to prepare a plan to be used as a general guideline for town
11 development. Our objectives in commissioning the plan were
12 (1) to provide an attractive community that would minimize
13 employee turnover, and (2) to dispel an historic image of a
14 "company town". The plan was completed in 1972. Applicants'
15 Exhibit No. 37, titled "The Plan for Colstrip, Montana" is a
16 copy of the Ken R. White Company plan. It is true and correct.
17 The plan assumes construction of Colstrip Generating Units 1 and
18 2 and a population in 1980 of approximately 1,780. The plan
19 identified additional areas for future expansion if the town
20 exceeds anticipated growth.

21 In the original town area, all of the houses had a similar
22 appearance; all were painted identically and all were set back
23 the same distance from the street. To avoid the company town
24 appearance, the Ken R. White Company plan recommended variety
25 in housing construction, open spaces, pedestrian and bicycle
26 paths and curvilinear street patterns in contrast with the
27 existing gridiron layout. When carried out, it would provide a
28 cohesiveness to the entire community.

To implement the plan, Western Energy Company engaged a joint venture, consisting of three Billings, Montana, firms: Wirth Associates, Christian, Spring, Sielbach and Associates, and Drake-Gustafson and Associates, to provide landscape planning, engineering and architectural services. Under the guidance of the joint venture, we have constructed 109 single-family houses, 11 four-unit apartment buildings, three eight-unit apartment buildings, and a motel. Associated utility services, including water and sewer, streets, curbs and gutters have also been constructed. Recreational facilities, including parks, ball fields, tennis courts, tot lots, a bicycle/pedestrian path system and a community center are also being constructed. Moreover, lands have been set aside and dedicated for additional churches and school expansion. In carrying out these plans, Western Energy Company has spent over \$10,000,000 since 1970.

Western Energy Company believes its objectives for the town of Colstrip are being accomplished. The town has been platted under State of Montana subdivision regulations. Plans are now being formulated to sell individual homes and homesites. Several lots have already been purchased for development by others. Negotiations are underway with potential buyers for sale of the commercial center. It is our intention to remove Western Energy Company from the role of landlord at Colstrip now that the pattern of town growth has been established and is protected by the covenants filed with the plat.

With platting complete and continued cooperation of County and State planning agencies, we believe the town's further development will proceed on an orderly basis with diminishing

1 involvement by Western Energy.
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1 EXAMINATION OF WARREN P. SCHMELCHEL

2 Cross, by Department of Natural Resources and Conservation,

3 By Mr. Sheridan:

4 Q Mr. Schmechel, have you had any training in the science of
5 botany, plant pathology, meteorology, or biology?

6 A I have not.

7 Q When did Western Energy Company acquire its coal holdings at
8 Colstrip?

9 A Western Energy Company acquired the holdings in 1966. Prior
10 to that time, those coal holdings were held by the Montana
11 Power Company. Montana Power Company acquired the coal
12 holdings in 1959. In 1959 they consisted of about 75 million
13 tons of proven reserves. Subsequently, Western Energy
14 Company expanded those reserves to include the present
15 reserve base of 830 million tons of coal in place.

16 Q Does Western Energy Company have coal holdings in states
17 other than Montana?

18 A Western Energy Company has coal holdings in the states of
19 Wyoming and Texas.

20 Q What are the holdings in Wyoming?

21 A Where are they located; is that your question?

22 Q What is the extent of holdings in Wyoming?

23 A They are not all proven, so it is difficult to define
24 exactly how many tons of in place coal exist in our Wyoming
25 coal holdings. We have proven reserves of approximately
26 10 million tons in one area, and 6 million tons in another
27 area, and those have been established by drilling and
28 geologic and mapping means.

1 MR. ROSS: Just a moment. I'm going to object to
2 this line of questioning on the basis that it's
3 irrelevant what coal holdings we have in Wyoming.

4 MR. BELLINGHAM: I'd like to point out, if I may,
5 that I think this subject came up previously when
6 Mr. Rice was testifying.

7 MR. SHERIDAN: And the basis of the objection at
8 that time was that we were concerned with air and
9 water quality.

10 MR. BELLINGHAM: No, the objection was the same
11 as this, as I recall, in addition, perhaps, and I
12 remember that the objection was sustained.

13 HEARINGS EXAMINER: Very well. If I recall, that
14 objection was sustained a little bit different, but
15 I'll overrule the objection and permit some limited
16 inquiries along this line.

17 Q Now Mr. Schmechel, with respect to the Western Energy Company
18 coal holdings in the state of Wyoming, I would also like to
19 know whether or not there are any natural gas reserves
20 located in the state of Wyoming?

21 A Natural gas reserves located in the state of Wyoming held by
22 Western Energy Company?

23 Q Right.

24 A Western Energy Company does not hold any gas reserves.

25 Q Is the same true for Texas?

26 A The same is true for Texas.

27 Q Now, Your position with Western Energy Company presently is
28 the President and Chief Operating Officer, correct?

1 A That is correct.

2 Q What other subsidiary corporations of the Montana Power
3 Company do you hold an office for?

4 A Under Western Energy Company we have a subsidiary company
5 titled Northwestern Resources Company, and I am the President
6 and Chief Operating Officer of that company.

7 Q What's the activities of that company?

8 A It was formed to acquire coal holdings in Wyoming.

9 Q Are you a member of the board of any other company?

10 A You didn't qualify -- am I a member of the board of Western
11 Energy Company, and the answer to that is yes, and I am a
12 member of the board of directors of Northwestern Resources
13 Company. I am not a member of the board of directors of any
14 other Montana Power Company subsidiary.

15 Q Are you a member of the board of directors of Montana Power
16 Company?

17 A No, I am not.

18 Q Have you held an office with Montana Power Company?

19 A Yes, I do. I am a vice president of Montana Power Company.

20 Q Do you have any responsibilities with respect to the produc-
21 tion, acquisition, distribution of gas from Canada?

22 A No, I do not.

23 MR. ROSS: Just a moment. I'll object to that.

24 I don't think that's -- that's irrelevant, and immaterial
25 also.

26 HEARINGS EXAMINER: Overruled. He can answer.

27 He answered as, no, he does not.

28 Q The answer is no?

1 A The answer is no.

2 Q Where is your principal office located?

3 A The principal offices of Western Energy Company and North-

4 western Resources Company are both located in Butte.

5 Q Same building as Montana Power Company?

6 A That is correct.

7 Q Do you have any experience in the operation of a coal-fired

8 generating plant?

9 A If you would elaborate on that question, I think I could

10 perhaps answer it better, because experience in the operation

11 of a coal-fired generating plant might have to do with the

12 delivery of coal to that plant.

13 Q Excluding delivery of coal?

14 A I have not had any direct operating experience in a coal-

15 fired generating plant.

16 Q Have you had formal educational training in land reclamation?

17 A I have not had any formal academic training in land recla-

18 mation. I have been associated with land reclamation activ-

19 ities constantly since 1968. Education can take on many

20 dimensions, one of which is practical experience and asso-

21 ciation, and in that regard, I have had a great deal of

22 exposure to the science of land reclamation.

23 Q You are not the manager, are you, of Western Energy's

24 reclamation activities?

25 A As the President and Chief Operating Officer, I would have

26 to answer that I am directly in charge of it. The work,

27 however, in detail, is performed by people who have that

28 special assignment.

1 Q Do you have an individual in the employ of Western Energy.
2 Company whose title is Reclamation Manager?

3 A Not as exactly that title. We do have two people, however,
4 who are directly involved in reclamation activities with
5 special training, academic training, in that field. One
6 is Michael Grende, and his title currently is Permit Super-
7 visor, and his responsibilities are the overview and the
8 overall management of reclamation activities and the
9 obtaining of permits under the state land department and
10 the federal government. The other person is titled Reclam-
11 ation Engineer, and his name is West Boettger.

12 Q Has Western Energy Company received any reports of water
13 contamination, ground water contamination now, in and about
14 the area of Colstrip, since strip mining has commenced?

15 A In and about the area of Colstrip, there has been one
16 instance, to my knowledge, where a well was reported to have
17 either produced less water, or water of a lesser quality,
18 and that was some distance from Colstrip. We responded to
19 the inquiry by the party involved and demonstrated to them
20 that it was not related to the mining activity. This
21 occurred, perhaps, in 1969 or 1970.

22 Q Now, Western Energy Company not only is responsible for the
23 operation of the strip mine at Colstrip for delivery to the
24 Colstrip plants, but also Western Energy sells coal to other
25 utilities, doesn't it?

26 A That is correct.

27 Q What other utilities does Western Energy sell coal to?

28 A We sell directly to Northern States Power Company of

1 Minneapolis, Wisconsin Power and Light Company of Madison,
2 Wisconsin, Commonwealth Edison Company of Chicago, Lake
3 Superior District Power Company of Ashland, Wisconsin, and
4 to Great Lakes Coal and Dock Company of St. Paul, Minnesota,
5 which in turn resells the coal to twenty small industrial
6 and utility customers in the Minnesota, Wisconsin, Iowa
7 area.

8 Q Are all those buyers of coal recipients of the coal by rail?

9 A That is correct. All of the coal that we deliver presently,
10 is delivered by rail.

11 Q Are any of the coal orders delivered from sites other than
12 in Montana?

13 A Would you please rephrase that question?

14 Q Do any of these customers you listed for me receive coal
15 sold by Western Energy which has been mined from sites other
16 than those located at Colstrip or the state of Montana?

17 A We have delivered test quantities from our reserves at
18 Grass Creek, Wyoming. This occurred on a one-time basis; it
19 was several years ago. Other than that one instance, we have
20 not delivered coal to our customers from any location except
21 Colstrip, Montana.

22 Q It's true, isn't it, sir, that at one time in the last three
23 years, Western Energy Company was negotiating with Japanese
24 trading companies for the delivery of coal from Colstrip?

25 A Within the last three years?

26 Q Oh, last five?

27 A Within the last five years, we had discussed the possibility
28 of selling coal from our Colstrip mine to Japanese trading

1 companies. However, at the time, there was an embargo in
2 Japan against receiving any steam coal. The only coal that
3 was being taken into Japan at that time from foreign sources
4 was metallurgical grade coal. The Japanese were protecting
5 their indigenous coal industry, and they protected that by
6 the embargo; and therefore, we did not pursue that sales
7 activity any further.

8 Q Western Energy Company was, however, willing to sell that
9 coal in the absence of an embargo?

10 A That is correct.

11 Q Now, Western Energy Company also was approached by Portland
12 General Electric Company for coal from Colstrip for delivery
13 to the Boardman coal-fired plant that PGE is constructing;
14 wasn't it?

15 A It was approached by Portland General Electric Company in a
16 formal letter request to discuss the possibility of sale of
17 coal from Colstrip. That occurred, however, two or three
18 years ago. This was some time following any discussion with
19 Japanese trading companies. By this time, however, we had
20 committed substantial quantities of coal from Colstrip, and
21 we were unable, at that time, to respond favorably to the
22 inquiry by Portland General Electric Company, and declined
23 to make a proposal to them on Colstrip coal. In our letter
24 to them, we identified that we had coal in other areas of
25 Montana, as well as in Wyoming, and told them that eventually,
26 when we were able to define exactly how much reserve we had
27 that would be available for sale, that we would contact them
28 again. Their interest was in acquiring coal that would meet

1 the Environmental Protection Agency emission standards for
2 sulfur dioxide, and there was no further correspondence with
3 Portland General Electric, and we learned subsequently that
4 they had obtained their coal under contract from Amax Coal
5 Company at Gillette, Wyoming, which coal would meet the EPA
6 standards without the installation of scrubbers.

7 Q Do you know whether or not the PGE plant at Boardman has
8 scrubbers?

9 A I beg your pardon, I didn't hear your question.

10 Q Are you familiar enough with the PGE Boardman plant to tell
11 me whether or not the PGE plant at Boardman has scrubbers?

12 A I am not familiar with the plant, so I cannot respond.

13 Q When was this letter inquiry received from PGE for Colstrip
14 coal?

15 A It would have been within the last three years.

16 Q When was your contract with Northern States Power last
17 renewed?

18 A Well, it wasn't renewed; it was initially executed in 1971.

19 Q For what term?

20 A For a twenty year term. The contract provides for two five
21 year options on mutual consent of the parties.

22 Q When was your contract last renewed for Wisconsin Power?

23 A That, I believe, also occurred in 1971 -- correction, in both
24 cases, the contracts were executed in 1972, both in the case
25 of Northern States Power and in the case of Wisconsin Power
26 and Light.

27 Q And when was your contract last renewed for Commonwealth
28 Edison?

1 A Commonwealth Edison contract was executed July of 1975;
2 however, shipments proceeded under the terms and conditions
3 of that contract beginning in February, 1975. It is a
4 short-term contract, extending for two years.

5 Q How much coal are you shipping?

6 A Would you qualify that by defining if you are asking to one
7 customer or another, or on a total basis?

8 Q Well, Commonwealth Edison has contracted with you for delivery
9 of coal over a period of two years, and under the terms of
10 that contract, I would like to know how much Colstrip coal
11 is dedicated to fulfillment of that particular contract?

12 A Four million tons.

13 Q Are there options to renew?

14 A No, they had an option for one additional year, which would
15 have provided for the delivery of one million tons in 1977.
16 They elected not to exercise the option.

17 Q Where are they getting their coal?

18 A I beg your pardon?

19 Q Where will they get their coal?

20 A They have many coal suppliers. I would assume that Common-
21 wealth Edison receives coal from five or six, or perhaps even
22 a dozen different suppliers, and I would assume that they
23 would receive the coal that they declined to exercise under
24 our contract, from one of the other six or one dozen coal
25 suppliers.

26 Q When was your last contract signed for delivery of coal from
27 Colstrip to the Lake Superior --

28 A District Power Company?

1 Q -- District Power Company?

2 A The contract actually has not been signed as of this date.

3 We have an appointment with the officers of Lake Superior
4 District Power Company in February of this year to sign the
5 contract. We have been delivering coal to Lake Superior
6 District Power Company for the last several years under a
7 purchase order arrangement in compliance with the terms and
8 conditions which are included in the form of contract.

9 Q How much coal have you dedicated to the fulfillment of the
10 contract with Lake Superior?

11 A About five million tons.

12 Q Is that yearly, or in total?

13 A That's in total. They require various amounts of coal each
14 year, approximately 80,000 tons per year.

15 Q When was your last contract renewed with Great Lakes Power
16 Company, is that it?

17 A Great Lakes Coal and Dock Company?

18 Q Great Lakes Coal and Dock Company.

19 A Great Lakes Coal and Dock Company is a broker and we have no
20 formal contract for the overall amount of coal which that
21 company takes. Each time, they sell coal to a small utility
22 or an industrial account. Prior to that sale, they ask us
23 if we have coal available to cover the sale. If we indicate
24 that we do, then we develop a letter agreement which is
25 signed by both parties. In all cases, they are short-term
26 contracts. Short-term letter agreements.

27 Q Under that particular agreement with Great Lakes, how much
28 coal did you deliver in 1975?

1 A Approximately 800,000 tons.

2 Q And how much coal did you deliver in 1974?

3 A My recollection is about 400,000 tons.

4 Q And how much coal did you deliver in 1973?

5 A I simply do not recall that.

6 Q Could you recall generally whether it was more or less than
7 the coal delivered in 1974?

8 A It would likely have been less coal than delivered in 1974.

9 Q How much coal is on order now for 1976 with Great Lakes?

10 A We have scheduled one million tons of coal for delivery to
11 Great Lakes Coal and Dock Company's customers in 1976.

12 Q Is Western Energy presently negotiating with other coal
13 purchasers for delivery of coal from Colstrip to generating
14 sites?

15 A I would prefer not to answer that. It is a proprietary
16 matter, and I'm not certain that the utility with whom we
17 are negotiating would want that known. We are negotiating
18 with a utility company at the present time for the delivery
19 of additional coal.

20 Q Well, I have to make some limited inquiry, just in the fur-
21 therance of public knowledge for purposes of this record and
22 the board's consideration, sir. Can you tell me whether or
23 not that utility with whom Western Energy is negotiating, is
24 one of the applicants for the Colstrip units 3 and 4?

25 A That utility is not one of the applicants for the Colstrip
26 3 and 4 projects; however, I do want to make a qualification
27 that we have a dedication of coal from Colstrip set aside,
28 a quantity of coal for the Colstrip 3 and 4 projects.

1 Q Without disclosing the name of that other utility, can you
2 tell me, in round figures, approximately how much coal is
3 being considered for dedication to fulfillment of any
4 arrangement with that unnamed utility?

5 A The amount of coal under consideration is three million tons
6 per year.

7 Q For how long?

8 A For a twenty year term.

9 Q Now, back about three years ago, how much coal per year did
10 PGE want?

11 A I'm sorry, I missed your question.

12 Q Back about three years ago when you got that letter of
13 inquiry from PGE, how much coal per year for how long did
14 PGE request?

15 A I just don't recall.

16 Q You know, don't you sir, that the PGE plant at Boardman is
17 a 500 megawatt facility?

18 A I may have read that number, but I'm just not refreshed on it.

19 Q Looking at pages 3 and 4 of your statement, Mr. Schmechel,
20 I note that since 1972 -- pardon me, since 1971, significantly
21 more coal in tonnage has been produced from the Colstrip site
22 than before. Of the increase in coal production from 1972 of
23 5, 501,000 tons to projected production in 1976 of 10,300,000
24 tons, how much of that coal will be used at the Colstrip site
25 itself?

26 A In the 10,300,000 ton figure?

27 Q Yes.

28 A We're estimating in there about 2,700,000 tons per year that

1 year to go to the Colstrip 1 and 2 plants. Correction, in
2 1976, 2,050,000, two oh five oh, in 1976.

3 Q And then in 1977, how much?

4 A Then it increases to 2,700,000.

5 Q In 1978?

6 A The same.

7 Q In 1979?

8 A That is the same also.

9 Q You were employed by Western Energy Company, were you not,
10 when proposed strip mining legislation in Montana was under
11 consideration?

12 A Yes.

13 Q Prior to enactment of strip mining reclamation legislation
14 in the state of Montana, it is true, isn't it, that you were
15 against adoption of the proposed legislation?

16 A I don't know that we actually opposed the legislation that
17 was finally passed. We appeared at the hearings on a number
18 of occasions during the course of developing that legisla-
19 tion, in order to provide certain modifications to it before
20 it was enacted.

21 Q You were against, at least initially, legislation requiring
22 reclamation of strip mined lands, or privately owned land,
23 were you not?

24 A I don't know that I can answer your question directly. I
25 don't know that we singled out privately owned land, or
26 whether we embraced all of the lands. In some of the cases
27 in the past when legislation was introduced, we were opposed
28 to it. We thought it was premature at that time.

1 Q Are you familiar with orphan spoils that were reclaimed by
2 BN at the Colstrip?

3 A I'm very familiar with the location of all of those spoils
4 that you refer to.

5 Q Who owns that property where those orphan spoils are located?

6 A Well, I assume that Burlington Northern owns all of the lands
7 on which they performed reclamation activities. There are
8 some of those orphan spoils that had been conveyed to the
9 Montana Power Company and Puget Sound Power and Light
10 Company.

11 Q Have those orphan spoils which were conveyed by Burlington
12 Northern to Western Energy Company, or Pacific Power and
13 Light Company, been reclaimed pursuant to the requirements
14 of the Montana Strip Mining and Reclamation Act of 1973?

15 A Let me correct your question. You mentioned Pacific Power
16 and Light Company. You mean Portland -- correction, Puget
17 Sound Power and Light Company?

18 Q Puget Sound Power and Light Company, yes.

19 A In some cases those lands have been used for other purposes.
20 They are not subject, however, to the Montana Strip and
21 Underground Mine Reclamation Act, because the activity
22 involving those orphan spoil lands predated the passage of
23 the law.

24 Q Has Western Energy Company undertaken reclamation activities
25 of that land received from Burlington Northern?

26 A The lands which were conveyed to the project? Do I under-
27 stand your question to mean that?

28 Q That's right.

1 A In some cases we have located facilities on that land, and
2 we have regraded that land for purposes of constructing
3 those facilities, but I don't know that you could classify
4 that as falling under the performance standards prescribed
5 by the act.

6 Q And that land that is not so used for installation of equip-
7 ment or facilities, which has no other use, but was conveyed
8 to Puget Sound Power and Light, or to Western Energy Company,
9 has not been reclaimed, has it?

10 A It has not been reclaimed as of this date, and may be used
11 in the future for the construction of additional facilities
12 and structures, and that is the reason that it has not been
13 reclaimed. It would be simply plowing money into a project
14 and then having to undo that expenditure for some other
15 purpose, so the lands are simply remaining in their present
16 state until the additional structures are incorporated on
17 them, if any.

18 Q Some of those structures wouldn't be additional generating
19 facilities, would they?

20 A Well, I really can't answer that question. because the lands
21 really aren't under my specific responsibility. Maybe you
22 could elaborate on it a little bit. Are you talking about --
23 would you carry that question forward?

24 Q Sure. Has anybody from Montana Power Company ever told you
25 not to reclaim that land because there was further develop-
26 ment contemplated on that land?

27 A Development to what extent?

28 Q Well, in consonance with what you told me the potential use

1 of that land that had not been reclaimed was being held for.

2 A The understanding I have is that we will not reclaim those
3 lands because there may be additional substation facilities,
4 or a transmission structure, or a cooling tower, or a pond
5 of some kind constructed on those lands.

6 Q Who told you that?

7 A Oh, I think I've heard that from several sources. George
8 O'Connor being one, personnel of the engineering department,
9 a number of people in the Montana Power Company organization.

10 Q Are the federal coal leases that Western Energy Company has
11 now at Colstrip, sites, or seam specific?

12 A Pardon, I missed your question?

13 Q Are the federal coal leases which Western Energy Company
14 holds now in the Colstrip vicinity, seam specific?

15 A Which specific?

16 Q Seam. S-e-a-m.

17 A Seam specific?

18 Q Yes.

19 A Oh, no, I see what you're driving at. No, it does not
20 prescribe one seam or another seam. It simply is a coal
21 lease for all of the seams underlying those lands.

22 Q Do you know whether or not Richard Hodder from MSU has
23 submitted an application to the Environmental Protection
24 Agency for reclamation research funds?

25 A I believe that Richard Hodder has a project currently with
26 the Environmental Protection Agency. I'm not acquainted
27 whether he has a new application with the Environmental
28 Protection Agency for an additional project.

1 Q Incidentally, Mr. Schmechel, of the coal resources available
2 to Western Energy Company as a result of federal leases,
3 is Western Energy Company marketing that coal to other
4 users?

5 A Would you repeat your question. I am a little hard of
6 hearing, so if you would repeat it I would appreciate it.

7 Q Is Western Energy Company marketing coal acquired by virtue
8 of federal coal lease rights to other users than those which
9 you have already testified to today?

10 A We're negotiating on the sale of additional coal, as I
11 mentioned to you, and that would involve federal leases.

12 Q And would that be to entities other than those which you've
13 already testified to?

14 A No. It would not be. It would include only those entities
15 that I've identified.

16 Q And would that provide for additional deliveries beyond that
17 which you've testified to?

18 A No. It provides only for the deliveries that I've identified
19 here today. That includes Colstrip 3 and 4, incidentally.

20 Q Right. Western Energy Company is going to sell coal to the
21 members of the consortium constructing the Colstrip gener-
22 ating units; isn't that right?

23 A That is our plan.

24 Q Have you contracted a price to those partners?

25 A We have not established a firm price with that group. That
26 price will depend upon the nature of the contract, the terms
27 and conditions that it contains. There are a number of
28 different concepts applicable to coal contracts, and until

1 we know the type of the contract that the five utility
2 companies want, it will be difficult to establish that firm
3 price. Also, machinery costs are changing very rapidly, and
4 until we are certain that we can enter into a contract with
5 the five utility companies, we'll not be in a position to
6 establish all of those machinery costs.

7 Q You're going to be in pretty tough shape if you have four
8 generating units there and you don't think you're going to
9 have coal available for them; aren't you?

10 A There I guess I don't understand your question, but let me
11 rephrase it, and then you can let me know if that is the
12 question you intend to ask. Your suggesting that there may
13 be a concern that the plants would be built before the mining
14 operation could be constructed and in service?

15 Q Not at ail, sir. That's not what I'm asking. My question
16 was, whether or not you would be in pretty tough shape if
17 you didn't think you had a pretty sure bet on coal to be
18 available for units 1 through 4?

19 A We assume coal will be available for units 1 through 4.
20 Coal is currently available for units 1 and 2, and reserves
21 are available for units 3 and 4.

22 Q And there's really going to be no problem as far as that
23 dedicated coal, you just have to sign the agreements, right?

24 A There'd be no problem as far as the total quantity of coal
25 is concerned, with one exception that we have made applica-
26 tion for additional federal leases, without which we could
27 supply the full requirements; however, those leases are
28 in a checkerboard situation -- situated in a checkerboard

1 pattern with our existing federal, state, and private leases;
2 and in the absence of the issuance of those leases, it means
3 that pockets of coal would be left behind; it means that the
4 mining costs likely would be increased because of the diffi-
5 culty of moving around large blocks of land.

6 Q You're not telling me that if you don't get those leases,
7 that you'll have to break contracts to which Western Energy
8 Company is a party to with other coal purchasers in order to
9 run units 1 through 4, are you?

10 A We will not have to break any contracts in order to supply
11 the full requirements of units 1 through 4.

12 Q Even in the absence of those federal leases?

13 A Even in the absence of those federal leases. That is correct.

14 Q How much land has been reclaimed in acres at Colstrip?

15 A Approximately 700 acres totally have been reclaimed. I
16 think that requires some definition.

17 Q Right.

18 A Fully reclaimed, including established vegetative cover,
19 would be somewhere between 200 and 300 acres. The balance
20 has been graded, topsoiled, seeded, and a crop is developing
21 on those lands, and we expect the same success on the balance
22 of those 700 acres as exists on the 200 to 300 acres that
23 are fully reclaimed.

24 Q Now, Western Energy Company, in its reclamation activities,
25 has made a practice of fertilizing the reclaimed land rather
26 heavily, hasn't it?

27 A No. The fertilizing that has been done is in normal amounts
28 for pasture lands, and it is done for the purpose of estab-

1 lishing a substantial root growth in the early years until
2 the plant system is recycling naturally. And in areas of
3 Colstrip, that is now occurring so that additional applica-
4 tions of fertilizer are unnecessary.

5 Q Of the 200 to 300 acres you've reclaimed to the point where
6 you now have vegetative cover on that plant, hasn't Western
7 Energy Company applied fertilizer each and every year since
8 seeding?

9 A I believe that is not the case, but it would be -- I would
10 say that it is not the case, conditioned on my checking into
11 that answer. I would have to consult with the people in
12 Western Energy Company that report to me on that activity.

13 Q Who would that be? Mr. Grende?

14 A Michael Grende.

15 Q Has Western Energy undertaken to determine whether or not,
16 after the first year's seeding, reclaimed land will allow
17 the growing of vegetation thereon at Colstrip?

18 A I did not understand your question.

19 Q If you don't fertilize every year after the first year, has
20 Western Energy Company determined whether or not that land
21 will sustain vegetative growth?

22 A We have areas at Colstrip that sustain the vegetative growth,
23 that regenerate, that recycle naturally without the appli-
24 cation of additional fertilizer.

25 Q What kinds of grasslands are doing that?

26 A Predominantly native, and some introduced species, in
27 accordance with the rules and regulations prescribed under
28 the Montana Strip and Underground Mine Reclamation Act.

1 Q Have any of the reclaimed lands been subjected to grazing
2 stress for a period of five years?

3 A The answer to your question is no; however, we are conducting
4 grazing studies currently; not at this exact moment, but
5 beginning last year, cattle were put on reclaimed lands and
6 it's a matter that is a -- it's a continued study, and will
7 continue for several years.

8 Q Has Western Energy Company undertaken to mine portions of
9 the McKay seam?

10 A We have mined McKay seam coal in test quantity on two
11 occasions. In one instance, a test quantity was shipped
12 to Minnesota Power and Light Company at Cohasset, Minnesota
13 for tests in its boilers, and on another, a test was shipped
14 to the Montana Power Company's plant styled the Corette
15 Station at Billings, Montana.

16 Q Does Western Energy Company intend to mine the McKay seam
17 at the same time the Rosebud seam is mined?

18 A We intend to mine the McKay seam coal at the same coordinate
19 with the rate of mining of the Rosebud seam coal in those
20 areas where the McKay seam is present under stripping ratios
21 that will allow economic mining, and in those cases, when we
22 develop a market for the McKay seam coal.

23 Q Looking at page 6 of your written testimony, Mr. Schmechel,
24 line 24, the statement is made, the remaining 130 acres were
25 seeded in May, 1973, and I am advised that these reclaimed
26 lands will now produce up to 2,500 pounds of vegetation per
27 acre, compared with only 900 pounds per acre on lands adja-
28 cent to the mined area. Do you know for a fact that that

1 130 acres was seeded in 1973, or 1972?

2 A These are the figures and the dates provided to me by the
3 members of my staff who report to me on a regular basis about
4 reclamation activities. I assume that they're correct.

5 Q How much of the town of Colstrip has Western Energy Company
6 -- well, who owns Colstrip right now, in bulk, the town?

7 A For the most part, Colstrip is owned by Western Energy
8 Company, at the moment. There are, however, churches, the
9 school facilities; there are independently owned homes, two
10 of which are owned by people who operate the Security Bank
11 of Colstrip; there are twelve additional lots on which two
12 houses are being constructed that are held under option, or
13 actually had been purchased by Delta Corporation of Billings,
14 Montana.

15 Q Is it Western Energy Company's intent to divest its ownership
16 in the town of Colstrip?

17 A That is correct. We will begin initially by conveying certain
18 of the houses to the project, which consists of the Montana
19 Power Company and Puget Sound Power and Light Company. The
20 rest of the houses and the commercial facilities will be
21 offered for sale to any interested buyers, in the case of
22 the commercial facility; predominantly to the people who
23 reside in the houses, in the case of the houses.

24 Q When does Western Energy Company intend to divest itself of
25 the bulk of its interest in the properties at Colstrip?

26 A We are establishing procedures now to accomplish that dives-
27 titure; as quickly as we find willing buyers, we will divest
28 ourselves of those properties. We've made some efforts to

1 sell the commercial facilities already, and we have found
2 buyers for certain of the lots, as I mentioned to you, so
3 that the process is already under way.

4 Q At what point in time does Western Energy Company desire to
5 be completely divested of property ownership in the town
6 of Colstrip?

7 A Well, as quickly as is reasonably possible.

8 Q Has Montana Power Company or Western Energy Company decided
9 upon a goal in terms of time?

10 A No. We know that it will take a fairly long period of time.
11 Obviously, people have to arrange for financing to buy homes,
12 and all of the procedural matters have to be accomplished.

13 Q What is the present population of Colstrip?

14 A If you include the construction forces involved in the
15 Colstrip 1 and 2 generating plants, I would estimate that
16 it's about 3,000.

17 Q The Ken R. White plan was developed to plan the community for
18 a population of how many people?

19 A 1,780 permanent population. That does not contemplate the
20 residual of all the construction workers remaining at
21 Colstrip, and very likely, they will not remain at Colstrip
22 after the construction activity.

23 Q Did the Ken R. White plan, as originally conceived and as it
24 now stands today, account for development as a result of the
25 installation of Colstrip units 3 and 4?

26 A The Ken R. White plan did not contemplate the construction
27 of Colstrip 3 and 4. It provided guidance on areas into which
28 the town might logically expand, as shown in the report. But

1 it did not contemplate construction of Colstrip 3 and 4.

2 The population figure that I gave you of 1,780 was predicated
3 on the year 1980.

4 Q Is the town of Colstrip, as conceived and planned by Western
5 Energy Company through Ken R. White, presently in compliance
6 with applicable subdivision regulations?

7 A It is, and it has been platted, the plat filed and accepted
8 by all of the appropriate state and county agencies.

9 Q Where do the present residences obtain their water supply
10 for domestic use at the present time?

11 A There are two sources of water. One is now considered a
12 standby system. The principal source is from the holding
13 pond north and west of Colstrip. Water to that holding pond
14 is delivered through the 26 inch water pipeline from the
15 Yellowstone River. There is a water filtering system and
16 chlorination system at that point. It's been constructed
17 and it's currently owned by Western Energy Company. That is
18 the principal supply of water. The standby system includes
19 four wells that were drilled prior to the time the primary
20 system was constructed, and in addition, a fifth deep well
21 extending down about 9,000 feet, which also contributed to
22 the supply of water prior to the time the principal source
23 was constructed.

24 Q You say that Western Energy Company desires to dispel the
25 historic image of a company town. What's the historic image
26 of a company town?

27 A Let me describe it to you this way. On one of the coal-selling
28 trips, I went to a town in upper Michigan called White Pine.

1 The town was owned entirely by White Pine Copper Company.
2 The stores were owned by White Pine Copper Company. The
3 bowling alley was owned by White Pine Copper Company. All
4 of the streets and the utilities were owned by White Pine
5 Copper Company and operated by its employees. The town was
6 very attractive, but it had no character to it. It had no
7 charm. We want Colstrip to become a town that has a little
8 character to it. We won't feel comfortable until it has
9 a Tastee Freeze constructed, and some of the other businesses
10 that normally accompany a town of 1,800 to 2,000 people.
11 And that's what we mean by dispelling the historic company
12 image. There's another element having to do with company
13 image. In a company town, characteristically all of the
14 houses were built alike. They were all set back from the
15 street identically. The driveways were all positioned on
16 the same side of the house. Generally, they're in a gridiron
17 pattern. All of the streets would be square to each other.
18 We have attempted to get rid of that type of an image by
19 devising curvilinear subdivisions, varying the setbacks of
20 houses, the character of the houses, and the painting and
21 the colors. And I think we've accomplished that to a very
22 considerable degree, because Colstrip, in my opinion, is a
23 very attractive town. For a town its size, it will stack up
24 against any town in the United States.

25 Q Assuming there's not another house in the way, is there
26 any residence at Colstrip from which you cannot see the
27 generating facility?

28 A I have not really positioned myself at every residence in

1 Colstrip to determine whether the answer to that question
2 is yes or no.

3 Q It's pretty likely that anywhere on the town border you can
4 see the stacks; isn't it?

5 A I presume that it would make a difference as to which
6 direction the house was facing.

7 Q Let's assume you're looking in the direction of the stacks.

8 A If you were looking in the direction of the stacks, I'm sure
9 you could see the stack, just as you can see the stack from
10 just about every residence in Helena over at East Helena,
11 or in Anaconda you can see the stack from the Anaconda
12 Company smelter from just about every residence in that city.

13 It is not a unique situation to Colstrip.

14 Q At the present time, of the residential units, be they
15 trailer homes or frame structures, what percentage are owned
16 by Western Energy Company?

17 A At the present time, it would be a very high percentage
18 because the only homes that are owned by other than Western
19 Energy Company are those that are being built by Delta
20 Corporation, and the two that belong to the bank employees,
21 plus certain church properties, and there are parsonages that
22 go with that church property.

23 Q Of the existing structures, approximately how many are rented
24 by construction workers that Western Energy does not expect
25 to remain at the site after completion of construction?

26 A I really have no idea.

27 Q How many homes are rented at the moment?

28 A They're all rented at the moment. All, with one exception,

1 and that house has not been completed.

2 Q Assuming units 3 and 4 are constructed, what does Western
3 Energy Company project to be the population of Colstrip?

4 A The Westinghouse report, my recollection is, projected a
5 population of approximately 3,700 people. I don't have any
6 reason to project a different number than that one.

7 Q How many of that population would be employed by any of the
8 power companies, Western Energy Company, or the Montana
9 Power Company?

10 A Of the total population, let's see, I'll have to do a little
11 calculating here, because we anticipate 482 in the mining
12 operation, 90 to operate Colstrip 1 and 2, and perhaps if
13 someone could give me the number of employees anticipated
14 for the operation of Colstrip units 3 and 4, I can provide
15 the answer to you. Let's assume another 100. Then, we're
16 looking at 672 totally that might be involved in employment
17 by Western Energy Company or its contractor, Long Construction
18 Company, and/or the people involved in the generating complex.

19 Q So, that's roughly two-thirds of the population that's going
20 to be deriving its income from a utility or a mining company?

21 A When you say two-thirds of the population, I think we would
22 have to take that number and make a demographic study of it,
23 a demographic distribution, because some of those people will
24 be single, some will be married without children, some will
25 be married with children, and when you equate that against
26 the 3,700 you might come up with an answer different than
27 two-thirds.

28 Q Well, I assume that part of that population will be workers'

wives and workers' families.

A I'm totally unfamiliar with that.

Q Not everybody's single in Colstrip, are they?

A Pardon?

Q Not everybody's going to be single in Colstrip, are they?

A Oh, no, I would assume that many would be married

8 What's your historical multiplier per worker?

A I really don't have that at my fingertips, but I'm sure it's contained in the Ken R. White report.

Q About 2.7, isn't it?

A If it's 2.7 in the White report, then that's the historic multiplier, because that was developed after a demographic survey was made by Ken R. White's people.

Q I really don't recall at this moment whether it is 2.7. I think that's historically what it is nationwide. I don't know myself.

A That was a number that you did not derive, then, directly from the Ken R. White report, is that right?

Q That's right. I don't want to mislead you. I'm not sure what Ken R. White says on that point. Since I last took your deposition, Mr. Schmechel, April 10th of 1975, has Western Energy undertaken any studies to determine the effectiveness of reclamation activities in a source where SO₂ is being emitted?

A We have not.

MR. SHERIDAN: Nothing further.

MR. ROSS: Could we have about a five minute
cess?

1 HEARINGS EXAMINER: You may have a ten minute
2 recess.

3 (RECESSED AT 3:55 P.M.)

1 Following a brief recess, the hearing reconvened at 4:10
2 P.M. on January 30, 1976.

3 HEARINGS EXAMINER: We'll proceed with the
4 redirect examination.

5

6 CONTINUATION OF EXAMINATION OF WARREN P. SCHMECHEL

7 Redirect, by Applicants,

8 By Mr. Ross:

9 Q Mr. Schmechel, when Portland General Electric approached you
10 about the possibility of providing coal to the Boardman
11 plant, at that time did you have known sufficient reserves
12 which you could dedicate for the life of the Boardman plant,
13 in order to negotiate with PGE?

14 A We had not done all of the drilling on the Colstrip reserve
15 at that time, and were not certain of how secure our reserve
16 position was. Also at that time, there was a lot of uncer-
17 tainty about federal leasing policies, which uncertainty
18 really began in about 1972 or 1973, and the letter from the
19 Portland General Electric people, as I recall it, came to us,
20 or the inquiry came to us, and the letter came to us, in
21 1974. Because of all of the uncertainties, we simply had to
22 decline to enter into discussion with them about supplying
23 coal out of Colstrip.

24 Q Mr. Sheridan asked you about your sales to other utilities
25 and attempts to sell coal to Japan, I believe, in 1970, when
26 you either negotiated, or tried to negotiate those other
27 sales; did you at that time have the necessary coal?

28 A We had the necessary coal, both in 1971 to commit to large

1 sales, because we had not consummated any other sales in
2 -- let's go back to the 1970 date -- in 1970, when we were
3 discussing briefly with Japanese trading companies. We
4 simply just did not have any major contracts at that time,
5 with the exception of the Corette unit in Billings, and a
6 small contract, short-term, with Northern States Power
7 Company, which has since expired. So, we had large reserves
8 and no customers. The selling of coal at that time was a
9 difficult matter. A lot of people had coal and there really
10 wasn't any market at that moment. The markets developed
11 later. Through our efforts, we were able to execute contracts
12 with Northern States, Wisconsin, and the other customers that
13 I mentioned.

14 Q Have you had any other inquiries from utilities in the
15 northwest regarding the possibility of obtaining coal from
16 Colstrip?

17 A We have not since the inquiry by Puget Sound -- correction,
18 inquiry by Portland General Electric. We have not had any
19 additional inquiry outside of the coal that would be required
20 for Colstrip 1, 2, 3 and 4. I presume that results from
21 the fact that there really haven't been any plants announced
22 except for the plant proposed by Portland General Electric.
23 To my knowledge, there had been no announced coal-fired
24 plants for the Pacific northwest since the Boardman plant
25 was announced.

26 Q Do you know of any other reasons why you have not had
27 inquiries from utilities in the northwest to ship coal to
28 the northwest?

1 A Well, the basic reason, unless there's a plant to be built,
2 there would not be any inquiry to supply coal. It's pretty
3 much that simple, but there's a lot of other coal available
4 to the northwest on different rail carriers than Burlington
5 Northern; for example, Union Pacific carries coal out of
6 the southern tier of Wyoming counties, and it could reach
7 into the northwest as easily as Burlington Northern, and
8 the coal out of those areas will meet Environmental Protec-
9 tion Agency standards, as will some of the other coals from
10 Wyoming that would be transported on Burlington Northern.
11 The Gillette area coal, for example, meets the EPA require-
12 ments. And I would assume that if additional plants are
13 announced for the northwest, they will be looking more
14 seriously at coal out of the Gillette area and the southern
15 Wyoming area than they will out of Colstrip.

16 Q Do you know if there's any difference between shipping coal
17 east from the Colstrip area and west from the Colstrip area
18 as far as geographics or cost?

19 A Well, in some of the work that we had done several years ago,
20 we saw a rather dramatic difference in the levels of freight
21 rates when you considered shipping coal east as opposed to
22 shipping coal west, and the main reason was that the trains
23 had to be smaller going west because of the mountain grades.
24 There were two or three mountain passes that had to be
25 crossed to reach a northwest location. There are no grades
26 to cross, no mountain grades at all to cross, going east.
27 It's a river run, so to speak, and you have to reflect that
28 additional cost of locomotives and the shorter trains in the

1 westward haul.

2 Q You mentioned a moment ago that utilities in the west, or
3 elsewhere, could obtain coal from southern Wyoming, I
4 believe, that had a lower percent sulfur content. Why would
5 this be important to those utilities?

6 A Well, to eliminate the installation of flue gas desulfuriza-
7 tion equipment. Wet scrubbers, for example, which are fairly
8 costly devices, and by burning coal that meets the Environ-
9 mental Protection Agency standards, you can eliminate that
10 cost.

11 Q Mr. Sheridan asked you about the possibility of additional
12 facilities being built in the Burlington Northern spoils
13 area. Do you know of any additional generation or coal
14 conversion facilities which are being planned at Colstrip?

15 A I do not. I have no knowledge of any such coal conversion
16 facilities proposed for Colstrip.

17 Q Mr. Wally McCrea of the Northern Plains Resource Council has
18 testified in this proceeding previously --

19 MR. SHERIDAN: I'm going to object. This is outside
20 the scope of cross.

21 HEARINGS EXAMINER: What's the point you're going
22 to get at on this? I'll hear what you have to say,
23 Mr. Ross.

24 MR. ROSS: Mr. McCrea testified that he had been
25 advised by this witness, Mr. Paul Schmechel, that the
26 Montana Power Company was contemplating building units
27 5, 6 and 7 at the Colstrip area, and a gasification
28 plant.

1 MR. SHERIDAN: This is far outside the scope of
2 cross-examination, Mr. Hearing Officer, and it's also
3 attempting to interject heresay into this hearing.

4 MR. ROSS: I would like to point out that the
5 subject of additional facilities was brought up on
6 cross-examination.

7 MR. SHERIDAN: Not by what Mr. McCrea --

8 HEARINGS EXAMINER: Didn't he just answer that
9 question, though, that he didn't know of any additional
10 facilities?

11 Q Okay, let me ask this: Have you informed anyone, have you
12 ever told anyone that there would be any additional genera-
13 tion or coal conversion facilities in the Colstrip area?

14 A I have not.

15 Q You've testified that when Colstrip was first started by
16 Western Energy Company, that Western Energy Company had
17 purchased and constructed most of the facilities and land
18 in the Colstrip area. Can you tell us why you have done
19 that initially?

20 A Well, of course, we owned the town as it then existed, and
21 it was logical that we would be the vehicle to expand the
22 town itself. We were anxious to preserve a quality appear-
23 ance at Colstrip, and to do that, we undertook the expansion
24 ourselves, and it was at a point in time that it is unlikely
25 that private developers would have been interested in moving
26 into Colstrip. They simply would not have foreseen the
27 prospects for success back in 1971, or '70 when we were
28 refurbishing the houses and doing some of the initial work

1 in Colstrip. So, we had to undertake that activity our-
2 selves, for that reason as well.

3 Q Is it correct that there's a commercial center in Colstrip?

4 A That is correct.

5 Q And who funded that?

6 A Western Energy Company currently has all of the money that
7 was invested in that commercial center. We do not operate
8 any of the stores in it, however, they're all leased out to
9 independent businessmen.

10 Q Is it correct that that commercial center and other commer-
11 cial property owned by Western Energy is for sale to private
12 parties?

13 A That is correct. We have negotiated with several concerns
14 for the sale of the commercial facility and any of the other
15 lands in the area designated for commercial development at
16 Colstrip.

17 Q Have you given any land away to other parties?

18 A Not in the commercial facility, but we have donated lands to
19 the school. In 1975 between eight and nine acres were
20 conveyed to the school at no cost. Earlier, 1966, we donated
21 land to the school. We have donated lands to recreation
22 activities through the Bureau of Outdoor Recreation proposed
23 project. And we have agreed to donate lands to certain
24 churches in Colstrip.

25 Q Do you have plans for any other facility such as a swimming
26 pool or a movie theatre in Colstrip?

27 A Well, let me take those one at a time. The movie theatre,
28 we assume, would be constructed in the ccmmercial area, and

1 if any party is interested in constructing a movie theatre,
2 there is land available for that. The swimming pool will be
3 included as a part of the Bureau of Outdoor Recreation
4 Western Energy Company complex, and it is adjacent to the
5 community center, which is about completed at Colstrip.
6 That's a large gymnasium, handball court, general meeting
7 facility, and it will coordinate with the swimming pool and
8 the bathhouses so that it will be a recreation complex and
9 it's located on a very large park which was donated, which
10 was dedicated under the BOR program.

11 Q When will the swimming pool be built?

12 MR. SHERIDAN: I'm going to have to object. This
13 is not only outside the scope of cross-examination, but
14 it's going to compel me to object to the testimony of
15 James Spring who talks about Colstrip, on the basis of
16 repetition. I don't think there's any controversy at
17 all here on this.

18 HEARINGS EXAMINER: Well, it's properly outside
19 the scope. Do you have much more you were going to
20 develop along this line, Mr. Ross, or not?

21 MR. ROSS: No.

22 HEARINGS EXAMINER: All right. Well, I'll over-
23 rule the objection. Let him answer.

24 A Would you repeat the question?

25 Q When will the swimming pool be built?

26 A We expect the construction of the swimming pool will start
27 in the spring, as soon as weather conditions permit, and as
28 soon as the frost is out of the ground.

1 Q We've discussed the town of Colstrip generally. Are there
2 any plans, or have there been any plans for a grocery store
3 and a department store or a bowling alley?

4 MR. SHERIDAN: Object. Outside the scope of the
5 cross.

6 HEARINGS EXAMINER: I'll sustain it if you have
7 another witness that's going to cover this. Do you
8 have another witness that's going to do this?

9 MR. BELLINGHAM: I'm not sure that there is, sir.

10 HEARINGS EXAMINER: Well, you can reopen your
11 direct, I guess, and you can ask him what developments
12 that weren't put in your written statement that weren't
13 crossed on, so go ahead.

14 MR. SHERIDAN: Before we go ahead, is counsel
15 going to represent at this time now that he does not
16 have a witness to testify to this after serving the
17 statement of James Spring upon the hearing officer?
18 Are you willing to do that?

19 MR. BELLINGHAM: Well, I'm not sure that James
20 Spring's statement does contain a timetable insofar as
21 these items are concerned.

22 MR. SHERIDAN: Well, then, it's outside the scope
23 of direct.

24 MR. BELLINGHAM: Well, I think the Hearings
25 Examiner's already indicated that he's allowed to
26 reopen the direct.

27 HEARINGS EXAMINER: Well, I'll let him reopen but
28 I would think that all the -- try not to be too

1 repetitive of what you have that another witness is
2 going to cover, if you can.

3 MR. ROSS: Okay, but I think it's important to
4 point out that this witness has discussed both in his
5 direct and on cross-examination the town of Colstrip
6 and what its facilities are.

7 MR. SHERIDAN: You might refer to page 9 of
8 James Spring's statement, which you prepared.

9 MR. BELLINGHAM: I'm a little bit concerned. I
10 think maybe the rules in Washington must be different
11 here. I never knew that there was a rule against two
12 people testifying as to the same thing.

13 HEARINGS EXAMINER: Well, you have the repetitive
14 rule, of course, for redundancy, and of course it's
15 been testified to somewhat before, but go ahead and try
16 to limit the thing to what you feel is really material
17 on it.

18 A The original commercial center structure provided room for
19 a grocery store, and we endeavored to get operators -- an
20 operator who would operate a store, but we have not found
21 any that were financially capable. They simply did not have
22 the resources to open the store, and in order to assist some
23 of these people, we even went so far as to purchase furnish-
24 ings and fixtures. We bought out the meat cases and all of
25 the cash registers and counters from the store that was going
26 out of business, and moved that down into Colstrip to assist
27 in this effort, but still were not able to get a grocery
28 operator, but we do now have two very substantial operators

that are interested in opening a grocery store at Colstrip.

Mr. Sheridan asked you about company towns. Do you have any experience with other coal company towns, and could you tell us -- first of all, do you have any experience with other coal company towns?

No, I have not, but we know that most operations do not provide for the housing of their employees, at least that I've reviewed in this part of the country, and that would include Westmoreland Resources' operation at Sarpy Creek, which is west of Colstrip, or the Amax operation outside of Gillette. The provisions for their employees are apparently left to the established communities. In the case of the Sarpy Creek operation, that would be Hardin; the Amax operation would be Gillette, Wyoming.

MR. ROSS: No further questions.

HEARINGS EXAMINER: Re-cross?

Re-Cross, by Department of Natural Resources and Conservation,

By Mr. Sheridan:

Mr. Schmechel, you have not been informed of any plans to construct a coal gasification plant by the Montana Power Company?

Montana Power Company, I believe, has not contemplated a coal gasification plant with any definite interest at all. We are following the processes of coal gasification. We would have coal reserves which could be dedicated for that purpose, but they are not located at Colstrip.

Q I take it from your previous testimony that you have no

1 experience operating a coal-fired generating facility, means
2 that you also have had no experience nor developed any
3 expertise in the evaluation of wet scrubbing devices for
4 coal-fired generating plants; am I correct?

5 A Of their operation, I'm sure that's correct.

6 Q In response to some questions asked regarding PGE by Mr.
7 Ross on redirect, what new coal buying customers does
8 Western Energy have that have taken delivery of coal from the
9 Colstrip mine, or from the McKay seam, since that letter of
10 inquiry was received by PGE?

11 A Repeat your question, please?

12 MR. SHERIDAN: Would you read the question back,
13 please?

14 (REPORTER READS BACK QUESTION.)

15 A Thank you for repeating the question. I wanted to make sure
16 I understood that you had reference to the McKay seam coal.
17 We have not shipped any quantity of McKay seam coal, other than
18 the two shipments that I described earlier, since receiving
19 the letter from Portland General Electric.

20 Q Now, same question, but with Rosebud seam coal?

21 A Rosebud coal? The same question, have we shipped any Rosebud
22 coal since receiving the letter of inquiry from Portland
23 General Electric?

24 Q To customers not already receiving Rosebud coal.

25 A Well, we have shipped test quantities of coal through Great
26 Lakes Coal and Dock Company to small industrial concerns.
27 We do that very frequently, because all of those contracts
28 under the Great Lakes Coal and Dock arrangement are short-

1 term letter agreements, and some phase out and then they buy
2 their coal from some other supplier, and in order to replace
3 that sale, Great Lakes Coal and Dock Company is developing
4 new customers, and in order to develop those new customers,
5 it is necessary to ship test quantities of coal. I'm not
6 in a position to identify each one, but they would enumerate
7 oh, maybe, twenty or thirty.

8 Q That's just because the Great Lakes is more of a broker;
9 right?

10 A That's because we have an arrangement with Great Lakes Coal
11 and Dock Company to sell our coal through their agency.

12 MR. SHERIDAN: Thank you. Nothing further.

13 HEARINGS EXAMINER: Mr. Ross?

14 MR. ROSS: Nothing further.

15 MR. BELLINGHAM: I have a couple of items I'd like
16 to address myself to.

17 HEARINGS EXAMINER: Just a moment, please. Not
18 with this witness?

19 MR. BELLINGHAM: No, sir.

20 HEARINGS EXAMINER: Very well, you're excused,
21 Mr. Schmechel. Thank you very much.

22 (WITNESS IS EXCUSED.)

23 MR. ROSS: Mr. Davis, I did move the admittance
24 of Applicants' Exhibit number 37.

25 MR. SHERIDAN: No objection.

26 HEARINGS EXAMINER: Applicants' Exhibit number 37
27 is admitted. Very well, now Mr. Bellingham?

28 MR. BELLINGHAM: Previously, certain requests have

1 been made, and I would like to go over those very
2 briefly. Some time ago, Mr. MacIntyre wrote a letter
3 to Mr. Ross relative to a study. At this time, I'm
4 going to turn over to Mr. MacIntyre a cost benefit
5 analysis proposal, Cold Stream to Hot Springs trans-
6 mission line, prepared by Cons Ed Research Corporation,
7 dated August 17, 1973. A request was previously made
8 of Mr. Labrie to turn over any studies that he might
9 have relative to geothermal activity as an alternative.
10 And at this time, I will turn over to opposing counsel
11 two memorandums: one dated April 4, 1969, a memo to
12 Mr. Stadler, copies to Mr. Ball, subject: Analysis of
13 Geothermal Power Economics, signed by R.J. Labrie; the
14 second study that I'll turn over is one dated November
15 16, 1970, a memorandum, subject: Geothermal Power
16 Economic Analysis of Geothermal Steam Development,
17 signed by Larry D. Thompson, engineering department.
18 Mr. Meloy does not seem to be here, so I'll put copies
19 on his desk.

20 HEARINGS EXAMINER: Do you have a copy for Mr.
21 Graybill's desk?

22 MR. BELLINGHAM: Yes, sir.

23 HEARINGS EXAMINER: Now I --

24 MR. BELLINGHAM: There's a couple of other items,
25 sir.

26 HEARINGS EXAMINER: Okay, you bet.

27 MR. BELLINGHAM: I'd like to also announce that we
28 will have three additional witnesses: Robert Labrie

1 will come back and testify very briefly concerning
2 certain things that have come up since his previous
3 testimony; we'll also have a Neal Woodley from Portland
4 General Electric relative to grit studies; we will also
5 probably have a Robert Mogen, County Assessor of Rosebud
6 County. Accompanying them will be certain exhibits, and
7 we hope to have these off to the other attorneys early
8 next week. Now, there's just a couple of other items.
9 I might announce at this time that as far as other
10 items which have previously been requested by opposing
11 counsel, two of them are in the process of coming and
12 will be delivered, I hope, when we once again convene.
13 The request was made for a study relative to surface
14 water purportedly prepared by Pete Edmonds of Westing-
15 house Systems. There is no such study in existence.
16 And a request was made of Robert Labrie relative to
17 specific environmental studies aimed at site selection.
18 In other words, environmental studies only, and there
19 are none of those to turn over. Now I'd like also to
20 announce that, to date, we have received one statement,
21 that of Dennis Haddow from the Department of Health.
22 We have received five statements from the Department
23 of Natural Resources involving written statements from
24 Wicks, Christenson, Cogan, Hindowi, and Gold. And other
25 than those, we have received no other statements from
26 the parties mentioned, or any other parties. I'd like
27 also to announce, so that there's no question, that
28 when we convene once again on Monday, February 9, I

1 believe, that the order of our witnesses will be as
2 follows: Monday afternoon, and that will be February
3 9 and I understand we will adjourn until afternoon, will
4 be Jim Spring; Tuesday, the 10th, if we understand, will
5 be reserved for the IBEW witnesses; and then, commencing
6 on Wednesday, that will be February 11, we hope to have
7 the remainder of our witnesses in the following order:
8 Zobel, Ender, Hotter, Dunkle, Evans, and following them
9 are three additional witnesses that I mentioned before.
10 Now we recognize the fact, as has happened before, there
11 may be problems as far as getting witnesses in and out
12 of town, schedules and so forth, but we will attempt to
13 maintain that schedule as close as we can. One other
14 thing, and finally, to date we have not received any
15 transcripts of any of the evidence since we have
16 convened here on January 19. We understand some of
17 those are out and we wonder if those are available.

18 HEARINGS EXAMINER: Okay, let me take one thing at
19 a time, and then I'll call on Mr. Sheridan. Starting
20 in reverse order. I just checked with the girl that's
21 working on those and the transcript was delivered and
22 has been taken to the printers, Bill, but she doesn't
23 have them back. They made some extra copies, and the
24 printers apparently copied volumes 1 through 14 that
25 were short, so there's no copies of those. Do you want
26 her to mail those when she gets them, immediately to
27 you?

28 MR. ROSS: Mail them to Butte.

1 HEARINGS EXAMINER: To Butte?

2 MR. BELLINGHAM: To your attention.

3 MR. ROSS: Yes, to my attention in Butte.

4 HEARINGS EXAMINER: Okay, I'll tell her that, John.

5 And the second thing is, so I don't forget it, we'll
6 recess until Monday the 9th at, say, 1:00. Does that
7 sound all right with everybody? Regarding the trans-
8 cripts now, there were certain other transcripts that
9 they had printed up sufficient copies for members of
10 both boards and all counsel, but they are short of
11 copies, so if everyone would look through their files
12 and see if they have any extra copies of volumes 18,
13 20, 25, 30-A, 34, 36, 38, 39, 40, 41-B, and 42, we'd
14 appreciate it. Steve said that they were short some
15 copies of those that had been printed, and it'll save
16 reprinting some more, apparently. On witnesses that
17 you wish to call, additional endorsed to your list, as
18 I understand it you won't be calling those until the
19 latter part of that week, so I assume that would be
20 all right. Now as far as the statements and exhibits
21 from the DNR, I'll let Bill speak to that.

22 MR. SHERIDAN: All right. I already placed on your
23 desk, Mr. Davis, the additional statement of testimony
24 for John F. Zablia, and I'm serving now upon counsel
25 for the applicants a copy of that statement. We expect
26 to have the remaining statements of testimony prepared
27 and served by mail during the first part of next week.
28 We have to identify a couple of exhibits before we do

1 it, but I think they'll be in within the next couple of
2 days next week.

3 HEARINGS EXAMINER: Now under the ruling, and
4 under the situation we find ourselves in, you were
5 given assurance that you would have as much time as they
6 had to have your people -- I realize you have to forward
7 them on to your experts and have them review them, and
8 so forth, so if we have to stop down the road for
9 failure to get them in on time, well we'll just have to
10 do that, but hopefully, we won't.

11 MR. SHERIDAN: I think the way the time scheduling
12 is going now, by serving these during the first part of
13 next week, they will probably have the advantage of
14 having our statements longer than we had theirs.

15 HEARINGS EXAMINER: That's not the ruling I made,
16 and I don't think there's going to be that advantage,
17 but that's the way it seems to be working out. That's
18 going to be kind of a point we'll have to see when we
19 meet it, and I don't think that's the way they do it
20 in most witness lists or exhibits when they're supposed
21 to be in. Now, as far as my plan is concerned, I've
22 received, as I mentioned off the record, notification
23 from about twenty or so public witnesses who wish to
24 testify. My present thought would be that I will write
25 those people this week and advise them that they should
26 come on Monday, which would be the 16th, I guess, and
27 let's take those before we start, if we can, on the DNR
28 case-in-chief. And then at that week that you're going

1 to try to finish up, then if you do find that it goes
2 faster, well, a lot of them are from this area, well
3 I'll try to notify them and work them in then so we can
4 move them along.

5 MR. SHERIDAN: Are you going through those state-
6 ments to determine whether all of them are proponent
7 statements? I've reviewed a couple and they are
8 opponent statements.

9 HEARINGS EXAMINER: Well, I think of the five I've
10 received so far, there are four proponents. The one
11 from the Forest Service, as I viewed it, was an opponent
12 statement. But, those are the only five that I've
13 received, and I've delivered those; now whether the
14 rest of them will testify orally or file statements,
15 I'm not certain. Is there anything else for the good
16 of the order?

17
18 (RECESSED AT 4:45 P.M.)
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